A. INTRODUCTION

This chapter examines the potential for impacts on traffic and parking associated with the proposed action. As described in detail in the "Future with the Proposed Action" section of this chapter, under the reasonable worst-case development scenario (RWCDS), the proposed action would result in a net increase of 4,708 dwelling units (DUs), ~~292,676~~ 195,215 sf of retail and 198,726 sf of community facilities (museum) uses on the 25 projected development sites, along with a new ~~6.7~~ 5.9 acre High Line open space. There would be a reduction of ~~816,876~~ 796,947 sf of office, 131,000 sf of hotel, ~~40,809~~ 74,818 sf of storage/manufacturing, ~~318,500~~ 225,940 sf of auto/parking uses, and ~~25,064~~ 4,080 sf of vacant space on the 25 projected development sites. The traffic study area was selected to include the intersections most likely to be used by concentrations of project-generated vehicles traveling to and from the proposed action area and is generally bounded on the north by W. 34th Street, on the south by W. 14th Street, on the east by Eighth Avenue, and on the west by West Street, as shown in Figure 16-1. This study area, for the most part is composed of a standard Manhattan grid of major north-south avenues and local east-west streets, except for W. 34th, W. 23rd and W. 14th Streets which are major two-way cross-town arteries. Outside of this large study area, traffic would be substantially dispersed and impacts would therefore be unlikely. Further, although the High Line itself extends south to Gansevoort Street, the proposed open space would generate negligible traffic (under 7 vehicles in any hour) and parking demand as shown later in this chapter.

As discussed later in this chapter, a trip generation forecast for the proposed action shows that an overall increment of ~~370~~ 295 vehicle trips is expected during the AM (8-9 am) peak hour, ~~916~~ 634 vehicle trips during the midday (1-2 pm) peak hour, and ~~727~~ 533 trips during the PM (5-6 pm) peak hour. Approximately one percent of this traffic demand would be due to the High Line open space, while 99 percent would be generated by the new residential and commercial development (see Table 16-7). Since the incremental vehicle trips generated by the proposed action in the AM, midday and PM exceed the 50 vehicle-trips/peak hour threshold for a detailed analysis as established in the *CEQR Technical Manual*, detailed AM, midday and PM peak hour traffic impact analyses are provided in this EIS. Further, as one or more of the projected development sites would displace a public parking facility, this chapter also provides an area-wide analysis of public parking.

The traffic and parking conditions in this chapter do not include a Saturday midday (typically 12-1 PM) analysis. Based on the ATR data collected, there would likely be no impacts in this period that were not already identified and addressed. The local street system in West Chelsea in the Saturday midday, in the aggregate, is about 20 percent lower than in the weekday. As an example, Saturday midday traffic on Route 9A is lower than the weekday AM, midday, and PM peak traffic by 10 percent, 26 percent, and 35 percent, respectively. On W. 23rd Street, it is 32 percent, 38 percent, and 30 percent less on Saturday. From the demand viewpoint, the Saturday midday peak hour would

have about 42 percent fewer vehicle trips than the comparable weekday period. Therefore, it is unlikely that there would be any new Saturday midday traffic impacts that were not already identified and addressed for the weekday condition.

The following section describes the 2004 Existing conditions for traffic and parking in the study area. The 2013 future conditions without the proposed action (the No-Action condition) are then described. Included are changes to study area transportation facilities, and increases in demand due to background growth and new developments in and around the study area that are expected by 2013. The change in travel demand resulting from the proposed action is then projected and added to No-Action conditions to develop the 2013 future with the proposed action (With-Action) condition. Potential significant impacts, if any, from action-generated trips are then identified and described in detail.

B. EXISTING CONDITIONS

As shown in Figure 16-1, the traffic study area consists of 60 intersections being analyzed for the weekday AM, midday and PM peak hours. The 60 intersections chosen for analysis are those expected to receive the highest concentrations of added vehicular traffic as a result of the proposed action. Data on the existing traffic conditions in the network were developed for 2004 conditions based on a combination of field counts conducted in May 2004, as well as already developed traffic networks form NYCDCP's *Far West Side Transportation Study* (2001 data), and the *Hudson Yards FGEIS* (2004 data). All data were updated using 2004 automatic traffic recorder (ATR) and manual turning-movement validation counts. Traffic counts also included vehicle classification counts, and travel time surveys (to determine vehicle speeds for the air quality assessment). Intersection signal timings were provided by the New York City Department of Transportation (NYCDOT). Parking utilization studies were conducted in 2004 for the midday and overnight periods at all public off-street parking facilities within a quarter-mile radius of the rezoning area boundary (as the High Line open space is not expected to generate significant parking demand), as was an inventory of on-street weekday curbside supply.

Figures 16-2 through 16-4 show the resulting peak hour traffic volumes for 2004 Existing conditions during the weekday AM, midday and PM peak hours within the study area street network.

VEHICULAR TRAFFIC

STREET NETWORK

The traffic study area in western Chelsea is typically structured as part of the standard Manhattan grid of north-south avenues serving as major arteries, and one-way east-west streets serving mainly a local distribution/land service function. The study area also includes three major two-way east-west arteries – W. 34th, W. 23rd and W. 14th Streets. These arteries carry the heaviest traffic, serve

Figure 16-1
Traffic Study Area

THIS FIGURE HAS BEEN REVISED FOR THE FEIS

LEGEND

Area to be Rezoned

Traffic Analysis Locations

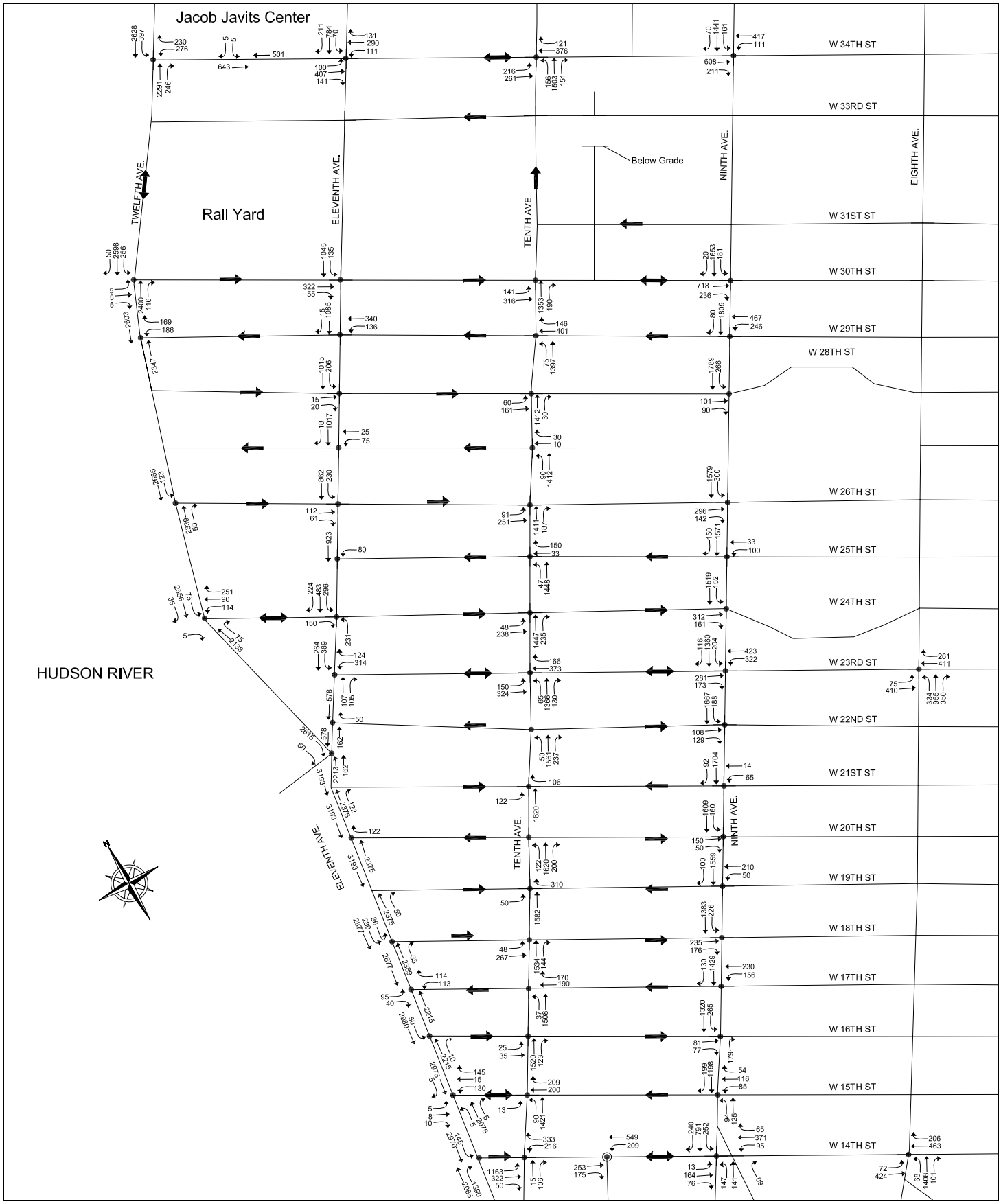
Traffic Study Area Boundary

High Line Boundary

Scale: 1"= 1100'

Figure 16-2
2004 Existing Traffic Volumes AM Peak Hour

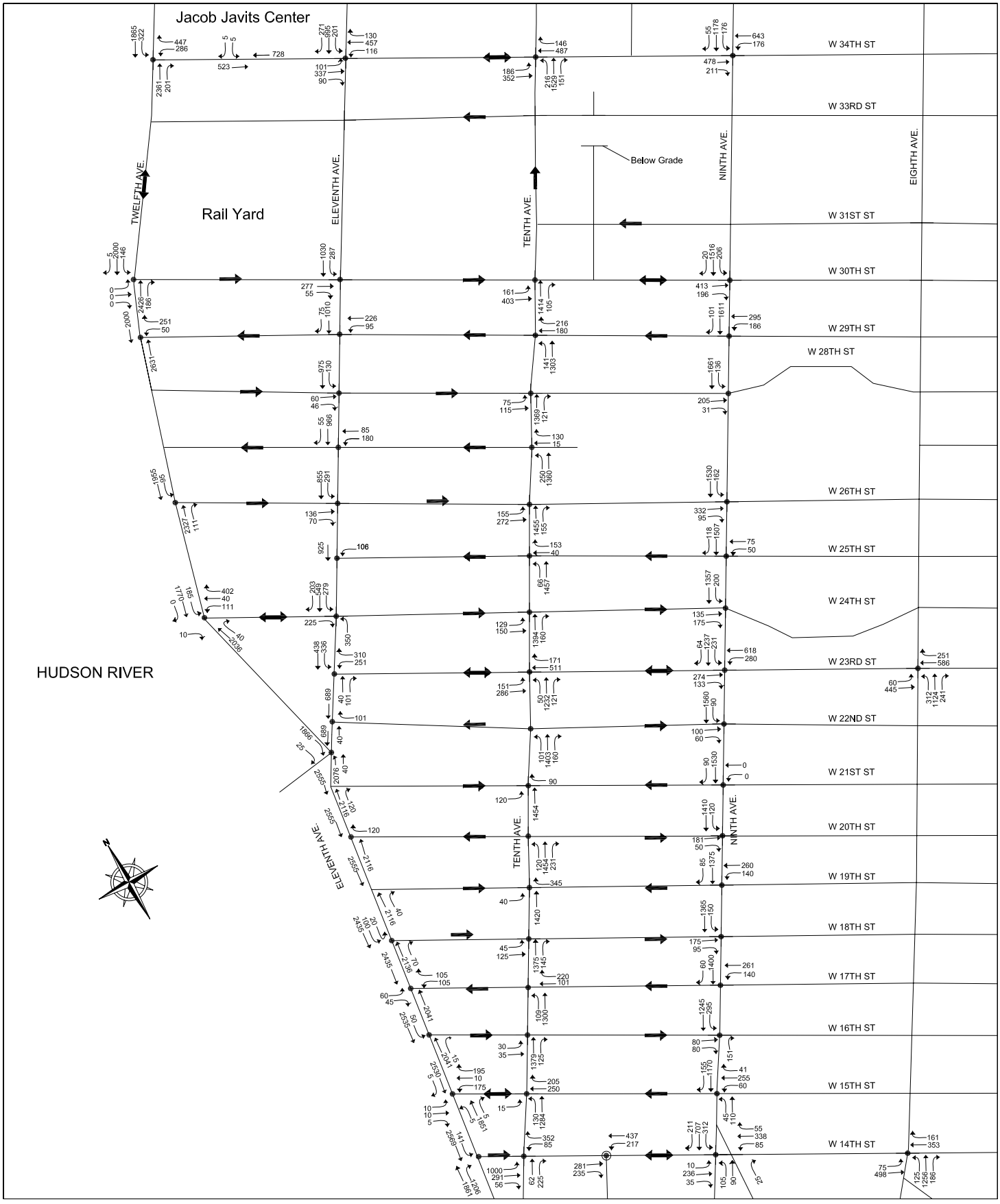
THIS FIGURE HAS BEEN REVISED FOR THE FEIS



LEGEND:

- ⊙ Analyzed Unsignalized Intersections
- • Analyzed Signalized Intersections

Figure 16-3
2004 Existing Traffic Volumes MD Peak Hour
THIS FIGURE HAS BEEN REVISED FOR THE FEIS

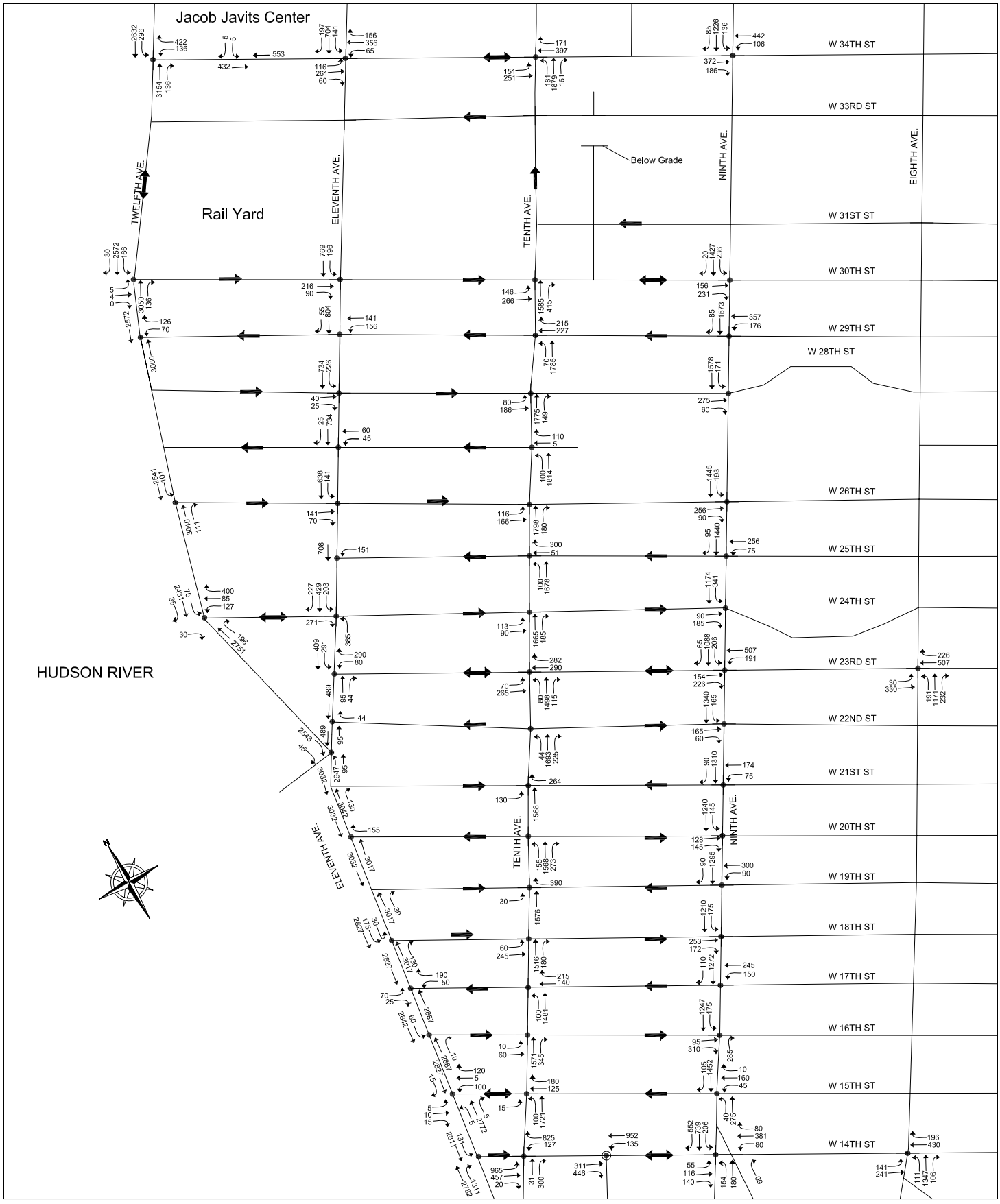


LEGEND:

- ⊙ Analyzed Unsignalized Intersections
- • Analyzed Signalized Intersections

Figure 16-4
2004 Existing Traffic Volumes PM Peak Hour

THIS FIGURE HAS BEEN REVISED FOR THE FEIS



LEGEND:

- ⊙ Analyzed Unsignalized Intersections
- • Analyzed Signalized Intersections

as local truck routes and also accommodate the NYC Transit bus system in the area. Pedestrians also concentrate on these arteries. The east-west local streets, typically narrower and more numerous, provide land service and, in the study area, are sometimes discontinuous due to prior formation of super-blocks (e.g. there is no W. 32nd Street in the study area, and W. 25th and W. 27th Streets are both discontinuous). It should be noted that W. 14th Street in this area is generally a dividing line, north of which commences the standard Manhattan grid. South of W. 14th Street there is an irregular street system which is a composite of different grid orientations. Given this interruption in the street grid system at its southern boundary, traffic volumes in West Chelsea study area are typically lower than elsewhere along the standard grid to the north.

In West Chelsea, Eighth, Ninth and Tenth Avenues are the major north-south "grid" arteries. Eighth Avenue on the eastern edge of the study area has six northbound lanes, with the curb lanes typically used for loading/unloading, bus stops, and metered parking. Eighth Avenue hosts the NYC Transit M20 local bus route and is a local truck route. Approaching W. 23rd Street (near the mid-point of the study area), Eighth Avenue carries fairly uniform peak hour flows, with approximately 1,650 vehicles per hour (vph), 1,700 vph and 1,600 vph in the AM, midday and PM peak hours, respectively.

Ninth and Tenth Avenues serve as the main avenue couplet in West Chelsea. Southbound Ninth Avenue and northbound Tenth Avenue each have six lanes, with curbside loading zones, bus stops, and metered parking available with daytime restrictions. Ninth and Tenth Avenues are local truck routes and also provide access to/from the Lincoln Tunnel which has access points in the northern portion of the study area. The M11 bus, which has a terminus on W. 15th Street, traverses both Ninth and Tenth Avenues in the study area. It should be noted that functionally, both Ninth Avenue and Tenth Avenue commence as a northbound/southbound couplet near W. 14th Street, below which there are changes to the standard Manhattan grid. At W. 23rd Street, Ninth Avenue carries approximately 1,700 vph, 1,500 vph and 1,400 vph in the AM, midday and PM peak hours, respectively, while Tenth Avenue carries approximately 1,600 vph, 1,400 vph and 1,700 vph, respectively.

Eleventh Avenue in the study area is one-way southbound from W. 34th Street to W. 24th Street, below which it is two-way to its terminus at Route 9A near W. 22nd Street. This relatively lightly-traveled avenue has six lanes, with its curb lanes typically dedicated to loading and/or parking. It is a local truck route, does not host any NYC Transit bus routes and, at W. 24th Street, carries southbound traffic of approximately 1,000 vph, 1,050 vph and 900 vph in the AM, midday and PM peak hours, respectively.

Along the western edge of the study area is Route 9A, a major two-way at-grade (south of W. 59th Street) expressway along the West Side of Manhattan. In the study area, Route 9A typically has three to four travel lanes in each direction plus dedicated left-turn lanes in each direction. On the northbound side of Route 9A, drop-off curb lanes are often also provided. Route 9A provides a parallel walkway/bikeway along its western edge and is a through truck route between W. 22nd Street and W. 34th Street. There are no NYC Transit bus routes on this roadway within the study

area. Two avenues in the study area (Tenth and Eleventh Avenues) have termini at Route 9A as the latter traverses diagonally across the grid commencing at West 24th Street. Route 9A approaching West 24th Street carries 4,900 vph, 4,000 vph and 5,500 vph in the AM, midday and PM peak hours, respectively. These Route 9A traffic volumes are typically greater than the combined volumes on Ninth, Tenth and Eleventh Avenues in the study area.

The major cross-streets are W. 14th Street at the southern edge of the study area, W. 34th Street at the northern edge of the study area and W. 23rd Street. They all have similar characteristics within the study area, with two-travel lanes in each direction, plus parking/loading lanes on both sides, and each street hosts one or two NYC Transit bus route (M14, M16/M34 and M23, respectively). Each of these major cross-streets also has a subway station at Eighth Avenue and is therefore more heavily utilized by pedestrians than other east-west streets. W. 34th Street interfaces with the Lincoln Tunnel exit roadway (Dyer Avenue) west of Ninth Avenue. Two-way traffic volumes on W. 34th Street approaching Ninth Avenue are approximately 1,350 vph, 1,500 vph and 1,100 vph in the AM, midday and PM peak hours, respectively, while comparable volumes at this location on W. 23rd Street are approximately 1,200 vph, 1,300 vph and 1,150 vph. On W. 14th Street near Ninth Avenue, two-way traffic volumes range from 750 vph to 850 vph in each peak hour in the study area.

The system of local cross-streets is comprised of one-way local streets with one or, less commonly, two lanes plus parking. West 30th Street is unique in that it is a two-way connector between Ninth and Tenth Avenues, providing the southern-most access to/from the Lincoln Tunnel. For the most part, the cross-street system is continuous and complete in the proposed action area south of W. 30th Street, while at the northern edge of the study area there are numerous discontinuities due to the rail yards in that area. Typical cross-street volumes are 400 to 600 vph, with a relatively high percentage of delivery vehicles. Except for bus loops at the end of some cross-town routes, no NYC Transit buses traverse the local cross streets.

CAPACITY ANALYSIS

The capacity analyses at study area intersections are based on the methodology presented in the *Highway Capacity Manual (HCM) Software 2000 Release 4.1d.* Traffic data required for these analyses include volumes on each approach and various other physical and operational characteristics. Signal timing plans for each signalized intersection were obtained from the NYCDOT. Field inventories were conducted to document curbside parking regulations, vehicle classifications, shared lane usage, and other relevant characteristics needed for the analysis.

The *HCM* methodology provides a volume-to-capacity (v/c) ratio for each signalized intersection approach. The v/c ratio represents the traffic volumes on an approach to the approach's carrying capacity. At a v/c ratio of between 0.95 and 1.0, near-capacity conditions are reached and delays can becomes substantial. Ratios of greater than 1.05 indicate saturated conditions with queuing. The *HCM* methodology also expresses quality of flow in terms of level of service (LOS), which is based on the amount of delay that a driver typically experiences at an intersection. Levels of service range

from A, with minimal delay (10 seconds or less per vehicle), to F, which represents long delays (80 seconds or greater per vehicle).

For unsignalized intersections, the *HCM* methodology generally assumes that major street traffic is not affected by minor street flows. Left turns from the major street are assumed to be affected by the opposing, or oncoming major street flow. Minor street traffic is obviously affected by all conflicting movements. Similar to signalized intersections, the *HCM* methodology expresses the quality of flow at unsignalized intersections in terms of level of service based on the amount of delay that a driver experiences. This relationship differs somewhat from the criteria used for signalized intersections, primarily because drivers expect somewhat different levels of performance from the two different kinds of transportation facilities. For unsignalized intersections, levels of service range from A, with minimal delay (10 seconds or less per vehicle), to F, which represents long delays (over 50 seconds per vehicle).

Table 16-1 shows the LOS/delay relationship for signalized and unsignalized intersections using the *HCM* methodology. Levels of service A, B and C generally represent extremely favorable to fair levels of traffic flow; at LOS D the influence of congestion becomes noticeable as delay increases; LOS E is considered to be the limit of acceptable delay; and LOS F is considered to be unacceptable to most drivers, with traffic operations at or over capacity. In this study, a signalized lane grouping operating at LOS E or F and/or with a v/c ratio of 0.95 or above is identified as congested. For unsignalized intersections, a movement with LOS E or worse is also identified as congested.

Table 16-1, Roadway Level of Service (LOS) Criteria

Level of Service	Average Delay per Vehicle (seconds)	
	Signalized Intersections	**Unsignalized Intersections**
A	less than 10.1	less than 10.1
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	greater than 80.0	greater than 50.0

Source: *2000 Highway Capacity Manual*

Table 16-2 shows the results of the 2004 Existing conditions capacity analysis at the 60 analyzed intersections in the AM, midday and PM peak hours. As shown in this table, the study area in West Chelsea generally operates at acceptable levels of service because of its unique edge location within

Table 16-2
2004 Existing Traffic Conditions

THIS TABLE HAS BEEN REVISED FOR FEIS

ANALYZED INTERSECTIONS	LANE GROUP	EXISTING AM Peak Hour V/C Ratio	AM Delay (Sec)	AM LOS		MD Peak Hour V/C Ratio	MD Delay (Sec)	MD LOS		PM Peak Hour V/C Ratio	PM Delay (Sec)	PM LOS	
W.34th Street (WB) @	WB - L	0.40	54.6	D		0.35	38.8	D		0.16	36.3	D	
12th Avenue (N-S)	WB - R	0.42	35.3	D		0.75	37.7	D		0.86	53.4	D	
(Route 9A)	NB - T	0.61	17.9	B		0.75	8.8	A		0.88	6.9	A	
	NB - R	0.33	15.2	B		0.31	18.3	B		0.17	13.4	B	
	SB - L	0.40	20.3	C		0.91	79.0	E	*	0.30	20.0	B	
	SB - T	0.66	2.8	A		0.59	2.4	A		0.81	7.6	A	
W. 30th Street (EB) @	EB - LTR	0.05	53.7	D		0.00	38.4	D		0.04	43.9	D	
12th Avenue (N-S)	NB - TR	0.65	9.2	A		0.77	20.5	C		0.79	3.7	A	
(Route 9A)	SB - L	0.97	103.9	F	*	0.60	50.7	D		0.71	52.1	D	
	SB - TR	0.71	3.1	A		0.61	2.3	A		0.70	2.9	A	
W. 29th Street (WB) @	WB - LR	0.82	85.7	F	*	0.45	45.8	D		0.30	42.1	D	
12th Avenue (N-S)	WB - R	0.71	74.6	E	*	0.67	53.7	D		0.38	43.6	D	
(Route 9A)	NB - T	0.52	2.2	A		0.63	2.4	A		0.77	3.4	A	
	SB - T	0.74	3.5	A		0.68	2.9	A		0.83	6.6	A	
W. 26th Street (E-W) @	NB - TR	0.59	3.1	A		0.68	2.7	A		0.76	3.3	A	
12th Avenue (N-S)	SB - L	0.36	52.2	D		0.27	39.3	D		0.27	39.2	D	
(Route 9A)	SB - T	0.84	5.6	A		0.67	2.9	A		0.78	6.6	A	
W. 24th Street (E-W) @	EB - R	0.02	50.2	D		0.04	37.3	D		0.08	36.4	D	
12th Avenue (N-S)	WB - L	0.30	55.6	E	*	0.22	39.3	D		0.36	41.1	D	
(Route 9A)	WB - LTR	0.51	60.8	E	*	0.26	40.1	D		0.22	38.4	D	
	WB - R	1.03	122.9	F	*	1.00	92.8	F	*	1.02	97.5	F	*
	NB - TR	0.70	4.2	A		0.89	8.9	A		1.03	44.1	D	*
	SB - L	0.88	95.4	F	*	0.99	107.4	F	*	0.39	54.4	D	
	SB - TR	0.78	4.1	A		0.63	2.9	A		0.86	16.4	B	
12th Avenue (SB) @	WB - T	0.80	63.3	E	*	0.84	49.9	D		0.56	39.8	D	
11th Avenue (WB)	NB - T	0.69	6.0	A		0.77	10.9	B		0.96	11.5	B	*
(Route 9A)	NB - R	0.51	49.9	D		0.10	26.8	C		0.22	28.6	C	
	SB - TR	0.82	5.1	A		0.68	9.3	A		0.87	13.6	B	
W. 34th Street (E-W) @													
11th Avenue (SB)	EB - LTR	0.94	54.8	D		0.61	35.2	D		0.66	3.4	A	
	WB - Defl	1.04	129.4	F	*								
	WB - TR	0.75	39.8	D		WB- LTR 1.02	69.5	E	*	0.83	42.6	D	
	SB - LT	0.33	3.5	A		0.51	7.1	A		0.30	3.4	A	
W.30th Street (EB) @	EB - TR	0.38	17.8	B		0.36	17.5	B		0.33	17.2	B	
11th Avenue (SB)	SB - LT	0.51	16.0	B		0.61	17.2	B		0.41	14.8	B	
W.29th Street (WB) @	WB - LT	0.44	18.5	B		0.32	16.9	B		0.29	16.6	B	
11th Avenue (SB)	SB - TR	0.53	16.3	B		0.54	16.3	B		0.40	14.8	B	
W.28th Street (EB) @	EB - TR	0.07	17.6	B		0.23	19.6	B		0.13	18.3	B	
11th Avenue (SB)	SB - LT	0.52	12.5	B		0.48	12.0	B		0.40	11.2	B	
W.27th Street (WB) @	WB-LT	0.11	20.4	C		0.32	22.7	C		0.12	20.4	C	
11th Avenue (SB)	SB-TR	0.39	8.6	A		0.41	8.8	A		0.29	7.9	A	
W.26th Street (EB) @	EB - TR	0.61	39.1	D		0.67	40.6	D		0.72	45.0	D	
11th Avenue (SB)	SB - LT	0.35	3.6	A		0.38	3.8	A		0.23	3.2	A	
W.25th Street (WB) @	WB - L	0.17	24.7	C		0.26	26.1	C		0.33	27.1	C	
11th Avenue (SB)	SB - T	0.32	5.4	A		0.26	5.1	A		0.22	4.9	A	

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Congested Intersections (LOS E or F, or V/C > 0.95)

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-2
2004 Existing Traffic Conditions

THIS TABLE HAS BEEN REVISED FOR FEIS

ANALYZED INTERSECTIONS	LANE GROUP	EXISTING AM Peak Hour V/C Ratio	AM Delay (Sec)	AM LOS		MD Peak Hour V/C Ratio	MD Delay (Sec)	MD LOS		PM Peak Hour V/C Ratio	PM Delay (Sec)	PM LOS	
W.24th Street (EB) @	EB-R	0.23	25.8	C		0.38	28.5	C		0.43	29.4	C	
11th Avenue (N-S)	NB-L	0.32	26.8	C		0.53	30.9	C		0.55	31.4	C	
	SB-TR	0.65	30.7	C		0.74	33.3	C		0.63	30.3	C	
W.23rd Street (E-W) @	WB - L	0.57	22.8	C		0.43	19.2	B		0.13	15.1	B	
11th Avenue (N-S)	WB - R	0.27	17.2	B		0.40	18.3	B		0.62	24.8	C	
	NB - TR	0.19	15.5	B		0.13	12.7	B		0.11	12.5	B	
	SB - L	0.79	33.2	C		0.68	26.5	C		0.52	21.2	C	
	SB -T	0.21	15.7	B		0.37	14.9	B		0.34	14.5	B	
W.22nd Street (WB) @	WB - R	0.04	10.8	B		0.09	12.9	B		0.03	12.4	B	
11th Avenue (N-S)	NB - T	0.28	49.0	D		0.06	32.2	C		0.13	33.0	C	
W.20th Street (WB) @	WB - R	0.34	50.3	D		0.19	32.5	C		0.23	33.1	C	
11th Avenue (N-S)	NB - T	0.57	3.8	A		0.56	2.5	A		0.80	4.0	A	
(Route 9A)	SB - T	0.83	4.9	A		0.99	18.8	B	*	0.96	20.6	C	*
W. 18th Street (EB) @	NB - TR	0.72	5.2	A		0.86	6.1	A		0.99	16.6	B	*
11th Avenue (N-S)	SB - L	0.82	71.0	E	*	0.22	33.1	C		0.44	37.3	D	
(Route 9A)	SB - T	0.85	5.6	A		0.95	11.4	B	*	0.90	7.3	A	
W. 17th Street (E-W) @	EB - L	0.68	91.5	F	*	0.14	44.8	D		0.26	53.7	D	
11th Avenue (N-S)	EB - R	0.32	73.2	E	*	0.11	44.6	D		0.15	52.8	D	
(Route 9A)	WB - L	0.69	82.5	F	*	0.98	132.0	F	*	0.23	45.5	D	
	WB - R	0.77	93.4	F	*	0.98	132.0	F	*	0.74	63.9	E	*
	NB -T	0.72	3.7	A		0.78	4.4	A		0.92	7.9	A	
	SB - T	0.95	14.2	B	*	0.99	27.5	C	*	0.90	15.4	B	
W.16th Street (EB)	NB - TR	0.66	4.6	A		0.79	4.5	A		0.92	16.4	B	
11th Avenue (N-S)	SB - L	0.09	1.2	A		0.09	0.5	A		0.10	13.9	B	
(Route 9A)	SB - T	0.88	6.4	A		1.04	41.3	D	*	0.91	15.6	B	
W. 15th Street (E-W) @													
11th Avenue (N-S)	WB - LTR	0.58	55.5	E	*	0.52	40.4	D		0.35	35.0	C	
(Route 9A)	NB - LTR	0.72	5.5	A		0.76	10.9	B		0.93	9.0	A	
	SB - TR	0.90	7.2	A		1.04	41.4	D	*	0.91	15.7	B	
W.14th Street (EB)	NB - T	0.58	4.0	A		0.69	9.6	A		0.86	5.5	A	
11th Avenue (N-S)	NB - R	0.78	7.7	A		0.81	22.2	C		0.81	21.8	C	
(Route 9A)	SB - L	0.27	6.5	A		0.24	13.5	B		0.88	59.2	E	*
	SB - T	0.91	7.8	A		1.03	36.9	D	*	0.90	15.1	B	
W.34th Street (E-W) @	EB - Defl	0.91	66.3	E	*	0.88	59.8	E	*	0.90	73.7	E	*
10th Avenue (NB)	EB - T	0.30	23.1	C		0.37	21.3	C		0.29	23.0	C	
	WB - TR	0.46	25.0	C		0.53	23.4	C		0.55	26.5	C	
	NB - LTR	0.51	8.9	A		NB-LT 0.72	14.4	B		NB-LTR 0.60	9.7	A	
						NB-R 0.26	13.3	B					
W.30th Street (EB) @	EB - LT	0.57	27.4	C		0.72	31.3	C		0.50	26.1	C	
10th Avenue (NB)	NB - TR	0.45	8.4	A		0.56	9.4	A		0.57	9.3	A	
W.29th Street (WB) @	WB - TR	0.70	31.0	C		0.55	27.3	C		0.58	27.9	C	
10th Avenue (NB)	NB - LT	0.44	8.3	A		0.59	9.8	A		0.56	9.3	A	
W.28th Street (EB) @	EB - LT	0.51	28.1	C		0.47	27.2	C		0.62	31.3	C	
10th Avenue (NB)	NB -TR	0.41	8.1	A		0.58	9.7	A		0.56	9.3	A	
W.27th Street (WB) @	WB-TR	0.05	20.5	C		0.14	21.2	C		0.17	21.7	C	
10th Avenue (NB)	NB-LT	0.43	8.2	A		0.63	10.2	B		0.50	8.7	A	
W.26th Street (EB) @	EB-LT	0.76	36.9	D		0.97	61.3	E	*	0.63	30.5	C	
10th Avenue (NB)	NB-TR	0.47	9.7	A		0.66	12.0	B		0.58	10.8	B	

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Congested Intersections (LOS E or F, or V/C > 0.95)

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-2
2004 Existing Traffic Conditions

THIS TABLE HAS BEEN REVISED FOR FEIS

ANALYZED INTERSECTIONS	LANE GROUP	EXISTING AM Peak Hour V/C Ratio	AM Delay (Sec)	AM LOS		MD Peak Hour V/C Ratio	MD Delay (Sec)	MD LOS		PM Peak Hour V/C Ratio	PM Delay (Sec)	PM LOS	
W.25th Street (WB) @	WB-TR	0.50	29.9	C		0.58	32.4	C		0.97	69.4	E	*
10th Avenue (NB)	NB-LT	0.41	6.9	A		0.57	8.2	A		0.48	7.3	A	
W.24th Street (EB) @	EB-LT	0.30	23.0	C		0.33	23.4	C		0.22	22.1	C	
10th Avenue (NB)	NB-TR	0.48	8.5	A		0.61	10.0	A		0.52	8.9	A	
W.23rd Street (E-W) @	EB - Defl	0.59	33.7	C		0.88	67.5	E	*				
10th Avenue (NB)	EB - T	0.36	23.1	C		0.33	22.8	C		0.31	22.4	C	
	WB - T	0.43	24.1	C		0.63	28.0	C		0.32	22.6	C	
	WB -R	0.50	28.5	C		0.49	27.7	C		0.78	40.6	D	
	NB - LTR	0.51	9.5	A		0.59	10.5	B		0.50	9.4	A	
W.22nd Street (EB) @	NB - LTR	0.61	10.5	B		0.71	12.2	B		0.62	10.6	B	
10th Avenue (NB)													
W.21st Street (E-W) @	EB - L	0.13	21.2	C		0.14	21.3	C		0.15	21.4	C	
10th Avenue (NB)	WB - R	0.26	23.3	C		0.14	21.4	C		0.65	33.2	C	
	NB - T	0.50	8.8	A		0.59	9.8	A		0.43	8.2	A	
W.20th Street (EB) @	NB - LTR	0.60	9.8	A		0.75	12.1	B		0.57	9.3	A	
10th Avenue (NB)													
W.19th Street (E-W) @	EB - L	0.11	21.2	C		0.09	21.0	C		0.06	20.7	C	
10th Avenue (NB)	WB - R	0.50	26.6	C		0.57	28.1	C		0.60	28.8	C	
	NB - T	0.50	8.8	A		0.56	9.4	A		0.42	8.1	A	
W.18th Street (EB) @	EB - LT	0.32	23.1	C		0.19	21.7	C		0.29	22.8	C	
10th Avenue (NB)	NB - TR	0.51	8.8	A		0.60	9.9	A		0.47	8.5	A	
W.17th Street (WB) @	WB - TR	0.47	25.7	C		0.46	25.5	C		0.47	25.7	C	
10th Avenue (NB)	NB - LT	0.46	8.5	A		0.55	9.4	A		0.43	8.2	A	
W.16th Street (EB) @	EB - LT	0.13	21.4	C		0.08	20.7	C		0.07	20.7	C	
10th Avenue (NB)	NB - TR	0.51	8.9	A		0.59	9.8	A		0.55	9.1	A	
W.15th Street (E-W) @	EB - L	0.05	17.5	B		0.07	17.8	B		0.04	17.3	B	
10th Avenue (NB)	WB - TR	0.49	22.7	C		0.56	24.0	C		0.37	20.8	C	
	NB - LT	0.49	12.0	B		0.62	13.6	B		0.60	13.1	B	
W.14th Street (E-W) @	EB - L	0.91	36.3	D		0.80	29.3	C		0.73	26.9	C	
10th Avenue (NB)	EB - T	0.29	19.5	B		0.26	19.3	B		0.39	20.8	C	
	EB - R	0.09	17.7	B		0.11	17.9	B		0.04	17.2	B	
	WB - L	0.74	36.3	D		0.33	21.5	C		0.98	67.8	E	*
	WB - R	0.52	24.3	C		0.69	30.6	C		0.97	55.8	E	*
	NB - TR	0.07	11.7	B		0.20	9.8	A		0.21	9.9	A	
W.34th Street (EB) @	EB-TR	0.72	29.4	C		0.69	29.4	C		0.54	26.4	C	
9th Avenue (SB)	WB - DefL	0.35	22.5	C		0.59	31.5	C		0.32	18.7	B	
	WB - T	0.33	14.2	B		0.52	16.6	B		0.35	14.4	B	
	SB - LTR	0.73	23.1	C		0.81	25.9	C		0.61	21.2	C	
W.30th Street (EB) @	EB-TR	0.89	39.6	D		0.58	27.5	C		0.41	25.0	C	
9th Avenue (SB)	SB-LTR	0.61	14.0	B		0.75	16.7	B		0.55	13.3	B	
W.29th Street (WB) @	WB-LT	0.87	39.7	D		0.62	28.6	C		0.65	29.3	C	
9th Avenue (SB)	SB-TR	0.58	9.5	A		0.71	11.5	B		0.51	8.8	A	
W.28th Street (EB) @	EB-TR	0.27	22.8	C		0.33	23.6	C		0.45	25.3	C	
9th Avenue (SB)	SB-LT	0.61	9.8	A		0.72	11.5	B		0.52	8.9	A	
W.26th Street (EB) @	EB-TR	1.03	80.2	F	*	1.02	76.7	E	*	0.85	47.2	D	
9th Avenue (SB)	SB-LT	0.55	9.1	A		0.66	10.6	B		0.48	8.6	A	

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Congested Intersections (LOS E or F, or V/C > 0.95)

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-2
2004 Existing Traffic Conditions

THIS TABLE HAS BEEN REVISED FOR FEIS

ANALYZED INTERSECTIONS	LANE GROUP	EXISTING AM Peak Hour V/C Ratio	AM Delay (Sec)	AM LOS		MD Peak Hour V/C Ratio	MD Delay (Sec)	MD LOS		PM Peak Hour V/C Ratio	PM Delay (Sec)	PM LOS	
W.25th Street (WB) @	WB-LT	0.19	24.7	C		0.18	24.5	C		WB-LT 0.44	27.9	C	
9th Avenue (SB)	SB-T	0.41	5.8	A		SB-TR 0.59	7.3	A		SB-TR 0.41	5.8	A	
	SB-R	0.20	5.3	A									
W.24th Street (EB) @	EB-TR	1.01	74.8	E	*	0.74	37.3	D		0.64	32.9	C	
9th Avenue (SB)	SB-LT	0.49	8.1	A		0.62	9.5	A		0.45	7.7	A	
W.23rd Street (E-W) @	EB-TR	0.62	30.9	C		0.61	30.7	C		0.54	29.0	C	
9th Avenue (SB)	WB-DefL	1.02	85.4	F	*	0.91	57.6	E	*	0.55	22.4	C	
	WB-T	0.38	17.6	B		0.56	20.3	C		0.43	18.3	B	
	SB-LTR	0.77	20.4	C		0.73	19.5	B		SB-LT 0.56	16.5	B	
										SB-R 0.12	15.0	B	
W.22nd Street (EB) @	EB-TR	0.56	29.1	C		0.39	24.7	C		0.50	27.1	C	
9th Avenue (SB)	SB-LT	0.70	12.0	B		0.64	11.0	B		0.54	9.8	A	
W.21st Street (WB) @	WB-LT	0.07	17.4	B		0.00	16.8	B		0.26	19.3	B	
9th Avenue (SB)	SB-TR	0.74	15.7	B		0.69	14.6	B		0.54	12.6	B	
W.20th Street (EB) @	EB-TR	0.23	19.0	B		0.26	19.4	B		0.31	19.9	B	
9th Avenue (SB)	SB-LT	0.70	14.9	B		0.63	13.7	B		0.53	12.5	B	
W.19th Street (WB) @	WB-LT	0.25	19.1	B		0.40	21.0	C		0.37	20.5	C	
9th Avenue (SB)	SB-TR	0.66	14.2	B		0.60	13.3	B		0.53	12.5	B	
W.18th Street (EB) @	EB-TR	0.47	22.2	C		0.33	20.3	C		0.47	22.2	C	
9th Avenue (SB)	SB-LT	0.64	13.9	B		0.63	13.7	B		0.53	12.5	B	
W.17th Street (WB) @	WB-LT	0.79	36.4	D		0.85	41.4	D		0.38	20.7	C	
9th Avenue (SB)	SB-TR	0.63	13.7	B		0.60	13.3	B		0.53	12.5	B	
W.16th Street (EB) @	EB-TR	0.32	30.8	C		0.34	31.2	C		0.86	51.0	D	
9th Avenue (N-S)	NB-R	0.18	11.1	B		0.16	13.7	B		0.29	15.0	B	
	SB-L	0.26	4.8	A		0.30	5.2	A		0.17	4.3	A	
	SB-T	0.37	1.3	A		0.36	1.2	A		0.34	1.2	A	
W.15th Street (WB) @	WB-LTR	0.50	35.4	D		0.77	44.7	D		0.43	34.2	C	
9th Avenue (N-S)	NB-DefL	0.21	10.4	B		0.11	7.8	A					
	NB-T	0.06	0.9	A		0.06	0.9	A		0.14	1.0	A	
	SB-TR	0.56	13.5	B		0.57	13.7	B		0.63	14.4	B	
W.14th Street (E-W) @	EB-LTR	0.59	36.7	D		0.67	39.2	D		1.00	85.6	F	*
9th Avenue (N-S)	WB - LTR	1.03	70.3	E	*	1.00	75.7	E	*	1.03	81.7	F	*
	NB-LTR	0.27	31.8	C		0.26	32.6	C		0.35	33.3	C	
	SB-LT	0.79	32.3	C		0.81	30.8	C		0.71	27.4	C	
	SB - R	0.35	29.7	C		0.32	22.9	C		0.79	35.3	D	
W.23rd Street (E-W) @	EB - LT	0.66	27.1	C		0.76	30.8	C		0.39	21.1	C	
8th Avenue (NB)	WB-TR	0.73	28.1	C		0.89	36.9	D		0.71	27.2	C	
	NB - LTR	0.60	18.5	B		0.87	25.8	C		0.63	19.0	B	
W.14th Street (E-W) @	EB- DefL									0.69	39.5	D	
8th Avenue (NB)	EB - LT	0.71	29.0	C		0.77	30.7	C		0.44	22.8	C	
	WB - TR	0.78	30.6	C		0.64	25.8	C		0.75	29.6	C	
	NB - LTR	0.49	11.9	B		0.70	18.9	B		0.41	12.2	B	
W.14th Street (E-W) @	WB- LT	0.25	10.4	B		0.31	11.5	B		0.22	12.1	B	
Washington Street (SB)													
(Unsignalized)													

NOTES:
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .
V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle
LOS - Level of service
* - Denotes Congested Intersections (LOS E or F, or V/C > 0.95)
Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

the Manhattan grid. Of the 60 intersections studied, 13 intersections have one or more congested movements in the AM peak hour, 15 intersections in the midday peak hour and 10 intersections in the PM peak hour. Along selected key corridors, Table 16-2 shows some congested locations, and these are discussed more fully below.

Route 9A Corridor

The Route 9A corridor is composed of intersections on Twelfth Avenue, as well as on Eleventh Avenue south of W. 22nd Street. Along the heavily traveled Route 9A corridor, as shown in Table 16-2, poor levels of service occur in the AM peak hour on one or more movements at W. 30th Street, W. 29th Street, W. 24th Street, Eleventh Avenue, W. 18th Street, W. 17th Street, and W. 15th Street. The southbound thru and left-turns are heaviest in the morning period with arriving workers accessing the Manhattan grid. The cross-streets (typically westbound movements) also have poor levels of service due to long waits for the green signal along with often heavy traffic at key cross-streets. Route 9A operates with a 150-second signal cycle length in the AM and a less efficient 120-second cycle length in other periods of the day. Of the 13 study area intersections with one or more congested movements in the AM peak hour, seven of them are on Route 9A.

In the midday peak hour as noted above, the traffic signal system alters its cycle length as well as its allocation of green time, and there is congestion on one or more movements at W. 34th Street, W. 24th Street, W. 20th Street, and all intersections from W. 18th Street to W. 14th Street. Of the 15 congested intersections in the study area during the midday, about one-half of them are concentrated on Route 9A.

In the PM peak hour, signal progression and phasing favor the northbound flow leaving the city. Table 16-2 shows that the following intersections have one or more congested movements: W. 24th Street, Eleventh Avenue, W. 20th Street, W. 18th Street, W. 17th Street and W. 14th Street. The congested movements are distributed among northbound, southbound, left-turns and cross-street approaches. Of the 10 study area intersections with one or more congested movements in the PM peak hour, six occur on Route 9A, with the remaining five intersections distributed over the remainder of the study area.

Eleventh Avenue Corridor

This is the most lightly traveled corridor from W. 34th Street to W. 22nd Street in the study area and congestion was noted at only one location, W. 34th Street, as shown in Table 16-2. As noted in the table, the congestion is on W. 34th Street itself where there are LOS E or LOS F conditions on the eastbound or westbound movements in the AM, midday and PM peak hours.

Tenth Avenue Corridor

Flows along this northbound corridor commence at W. 14th Street where traffic can exit from Route 9A, and consequently, Tenth Avenue is relatively lightly traveled south of W. 34th Street compared to the avenue's capacity. As shown in Table 16-2, of the 18 intersections analyzed on Tenth Avenue, there is one intersection with one or more congested movements in the AM peak hour, and three intersections each in the midday and PM peak hours. Congestion was noted on the eastbound movements on W. 34th Street in all peak hours due to heavy left turn volumes. In the midday peak hour, eastbound congestion was also found on W. 26th Street and on W. 23rd Street, while in the PM peak hour, there was westbound congestion on W. 25th Street and on W. 14th Street at Tenth Avenue.

Ninth Avenue Corridor

Similar to Tenth Avenue, Ninth Avenue traffic volumes are relatively low having shed much of its traffic north of W. 34th Street, including a major component destined to the Lincoln Tunnel via W. 36th Street north of the study area. Of the 17 intersections analyzed along Ninth Avenue, there are four intersections with one or more congested movements in the AM peak hour, three in the midday and one in the PM peak hour. All of this congestion is on the cross-streets. As shown in Table 16-2, the eastbound movement at W. 26th Street is congested in both the AM and midday peak hours, while the eastbound movement at W. 24th Street is congested in the AM peak hour. At W. 23rd Street, the westbound left-turns are congested in both the AM and midday peak hours, while at W. 14th Street, the westbound movement is congested in all peak hours, with the eastbound movement congested only in the PM peak hour.

Eighth Avenue

The two key West Chelsea intersections studied on Eighth Avenue at W. 23rd Street and at W. 14th Street showed no serious congestion in any analyzed peak hour.

PARKING

Public off-street public parking lots and garages within a quarter-mile radius of the rezoning area boundary were assessed for their capacities and approximate utilization during the weekday midday and overnight periods. Figure 16-5 shows the locations of the 33 off-street parking facilities in the study area and Table 16-3 shows their estimated midday and overnight utilization levels for existing conditions based on field observations conducted in February and September 2004. As shown in Table 16-3, the 33 public off-street parking facilities have a total of 5,378 spaces within a quarter-mile radius of the area. Nineteen of these facilities remain open during the overnight period, and provide a total of 3,648 spaces.

Table 16-3
2004 Existing Off-Street Parking Conditions

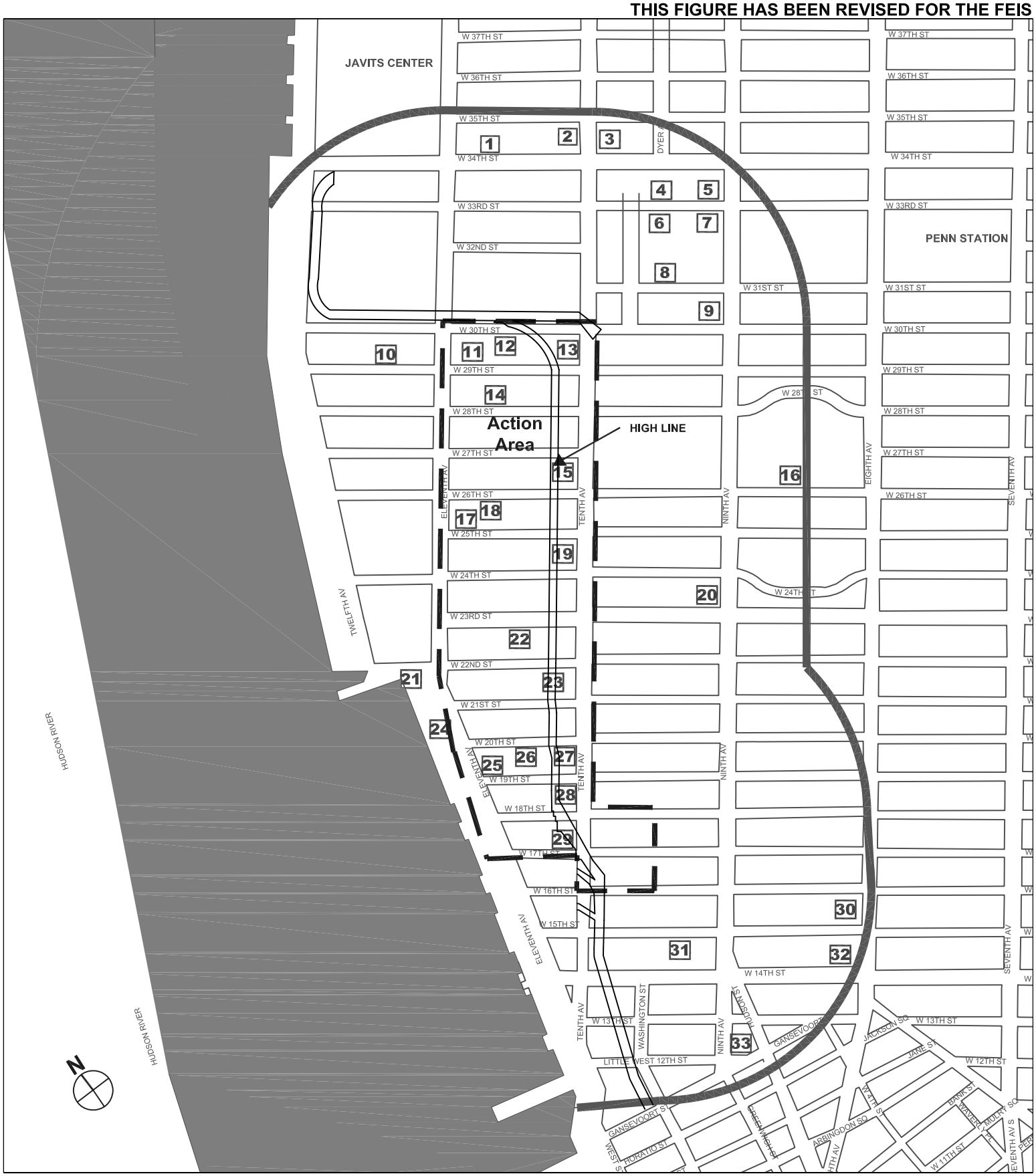
THIS FIGURE HAS BEEN REVISED FOR THE FEIS

Map No.	Name	Address	License Number	Licensed Capacity	Weekday Midday (12 PM - 2 PM)		Weekday Overnight (12 AM - 5 AM)	
					Utilization Rate	Available Capacity	Utilization Rate	Available Capacity
1	509 W. 34th St. Garage Corp.	509-525 W. 34th St.	427580	200	90%	20	(CLOSED)	
2	34 St. Parking Corp.	435 Tenth Ave.	976181	99	100%	0	(CLOSED)	
3	Kinney 444 Tenth Ave. Inc.	444 Tenth Ave.	973033	25	80%	5	(CLOSED)	
4	NJ Parking Inc.	431 W. 33rd St.	904655	77	100%	0	(CLOSED)	
5	Joseph Gutman	408 W. 34th St.	369196	25	100%	0	25%	19
6	Edison Ninth Ave. Parking Corp.	412-422 W. 33rd St.	428456 898031	115	80%	23	35%	75
7	Edison Ninth Ave. Parking Corp.	401-422 Ninth Ave.	696486	92	100%	0	75%	23
8	Tunnel Parking Corp.	425 W. 31st St.	1014335	145	90%	14	(CLOSED)	
9	Madison Square Parking Corp.	359-363 Ninth Ave.	993927	40	100%	0	80%	8
10	29 Operating Corp.	613 W. 29th St.	1066115	46	75%	12	(CLOSED)	
11	Enterprise 30th St. Garage Inc.	529-539 W. 29th St.	1083289	150	60%	60	90%	15
12	Enterprise 30th St. Parking LLC	506-530 W. 30th St.	1082418	113	95%	6	35%	73
13	Enterprise 30th St. Parking LLC	343 Tenth Ave.	1060717	50	80%	10	35%	33
14	Kaz Systems Inc.	282 Eleventh Ave/ 547 W. 28th St.	989662	134	100%	0	40%	80
15	W. 26th St. Parking Corp.	279-283 Tenth Ave.	892932	160	80%	32	(CLOSED)	
16	Impact Car Park LLC	333 W. 26th St.	1079092	839	90%	84	95%	42
17	Impark 25 LLC	545 W. 25th St.	1102256	160	30%	112	30%	112
18	Central Parking System of NY Inc.	560 W. 26th St.	1133628	50	100%	0	35%	33
19	249 Parking Corp.	249 Tenth Ave.	427868	120	100%	0	(CLOSED)	
20	W. 23rd St. Garage LLC	423-431 W. 23rd St.	998590	185	100%	0	(CLOSED)	
21	Chelsea Piers	Pier 63	N/A	150	90%	15	(CLOSED)	
22	514 West Corp.	510 W. 23rd St.	920084 920085	161	90%	16	(CLOSED)	
23	Edison NY Parking LLC	507 W. 21st St.	1040211	49	100%	0	(CLOSED)	
24	Chelsea Piers	Pier 61	N/A	163	50%	82	(CLOSED)	
25	Zil Navagacion S.A.	535 W. 19th Street	1026615	150	50%	75	(CLOSED)	
26	Chelsea Management Corp.	516-520 W. 20th St.	1168606	310	80%	62	30%	217
27	Edison NY Parking LLC	161-165 10th Avenue	1006124	80	85%	12	85%	12
28	Chelsea MTP Operating, LLC	511-25 W. 18th Street	1132509	250	100%	0	40%	150
29	Edison Parking	501 W. 17th St	N/A	377	100%	0	100%	0
30	111 Parking Corp.	111 8th Avenue	1002786	342	90%	34	75%	86
31	15th Parking Corp.	422 W 15th St	890426	374	90%	37	20%	299
32	14th @ 8th Avenue, LLC	West 14th St/ 8th Avenue	953178	47	100%	0	50%	24
33	Olympia Garage, Inc.	9 9th Avenue	427916	100	65%	35	60%	40
		TOTAL		**5,378**	**86%**	**745**	**63%**	**1,341**

Sources: PHA Field Surveys, 2004

Figure 16-5
Off-Street Parking Facilities

THIS FIGURE HAS BEEN REVISED FOR THE FEIS



LEGEND

------ Rezoning Area

1 Off-Street Parking Facility

——— Study Area Boundary

Scale 1":800'

As shown in Figure 16-5, many of the public off-street parking facilities are closed during the overnight period, as they are primarily filled by transient vehicles driven by daily commuters. Overall, the weekday utilization of all study area facilities under Existing conditions was found to be approximately 86 percent during the midday period and 63 percent during the overnight period.

Except along Route 9A, there is curbside parking for autos available at metered spaces in the study area during weekdays. In addition, several blocks have alternate side parking regulations typical of residential districts. Most other curbside regulations expire at 7PM for overnight parking and, on Saturdays and Sundays, almost all curb-side space in the study area has unrestricted parking. Overall, there are approximately 300 metered spaces during the weekday, concentrated along the avenues. These spaces are heavily utilized with an observed aggregate utilization rate of approximately 90 percent. In addition to the metered spaces, selected cross-streets in West Chelsea also have substantial alternate-side parking that provides about 1,500 spaces. These are concentrated along cross-streets between Eighth and Tenth Avenues from W. 17th Street to W. 28th Street as well as on W. 14th Street and blocks to the south, west of Ninth Avenue. These spaces are over 98 percent utilized during weekdays.

C. FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION)

In the future without the proposed action (also referred to as the No-Action condition), the proposed action would not occur. While most of the 25 projected development sites would remain with their present uses, nine sites are assumed to be redeveloped pursuant to current zoning (see Chapter 2, "Land Use, Zoning, and Public Policy," Table 2-2). During the 2004 to 2013 period, it is also expected that transportation demands in the study area would change due to development projects in the area as well as general background growth. In order to forecast these future demands without the proposed action, the development projects listed in Chapter 2, "Land Use, Zoning, and Public Policy," were considered in addition to an annual growth rate of 0.5 percent per year applied to Existing conditions.

As shown in Chapter 2, the principal No-Action site is Hudson Yards, located just north of the study area. This multi-use development project has two Build years, 2010 and 2025, and the analyses in this EIS incorporate those portions expected to be constructed by 2013. This includes the expansion of the Jacob Javits Convention Center, as well as a new multi-use facility and other office developments as presented in Chapter 2 (Table 2-3) of this EIS. It should also be noted that it is expected that the No. 7 train would be extended westward and to the south to provide service to the northern portion of the study area. Conservatively, no credit has been taken for the expected increase in transit usage and resulting reduction in existing traffic and parking demand in the study area from this new service.

Also of note, the redevelopment of Pier 57, located near the foot of W. 15th Street, would affect traffic conditions due to new travel demand and a change to traffic circulation at the site. Preliminary plans for this project, which is discussed in Chapter 2, call for a driveway for vehicles

exiting the site at Eleventh Avenue (Route 9A) and W. 16th Street. Currently, the few vehicles accessing the site enter and exit via the Eleventh Avenue (Route 9A) and W. 15th Street intersection.

Transportation demand from these No-Action development projects, along with the annual background growth to account for other smaller developments, were added to Existing conditions to form the 2013 No-Action transportation conditions. In addition, where appropriate, mitigation measures associated with No-Action development sites were also incorporated into the transportation analyses. Lastly, also where appropriate, the parking demand and supply were adjusted to reflect No-Action development.

VEHICULAR TRAFFIC

Figures 16-6, 16-7 and 16-8 show the expected 2013 No-Action weekday AM, midday and PM peak hour traffic volumes, respectively, at analyzed intersections within the study area, while Table 16-4 shows the corresponding 2013 No-Action v/c ratios, delays, and levels of service and compares them to Existing conditions. As shown in Table 16-4, presently congested locations generally become worse, while there are some newly congested locations in the study area. Overall, under No-Action conditions, of the 60 intersections studied, ~~18~~ 19 intersections have one or more congested movements in the AM (versus 13 under Existing conditions), ~~20~~ 23 intersections in the midday peak hour (versus 15 under Existing conditions) and 19 in the PM peak hour (versus ~~11~~ 10 under Existing conditions). Newly congested intersections are discussed below.

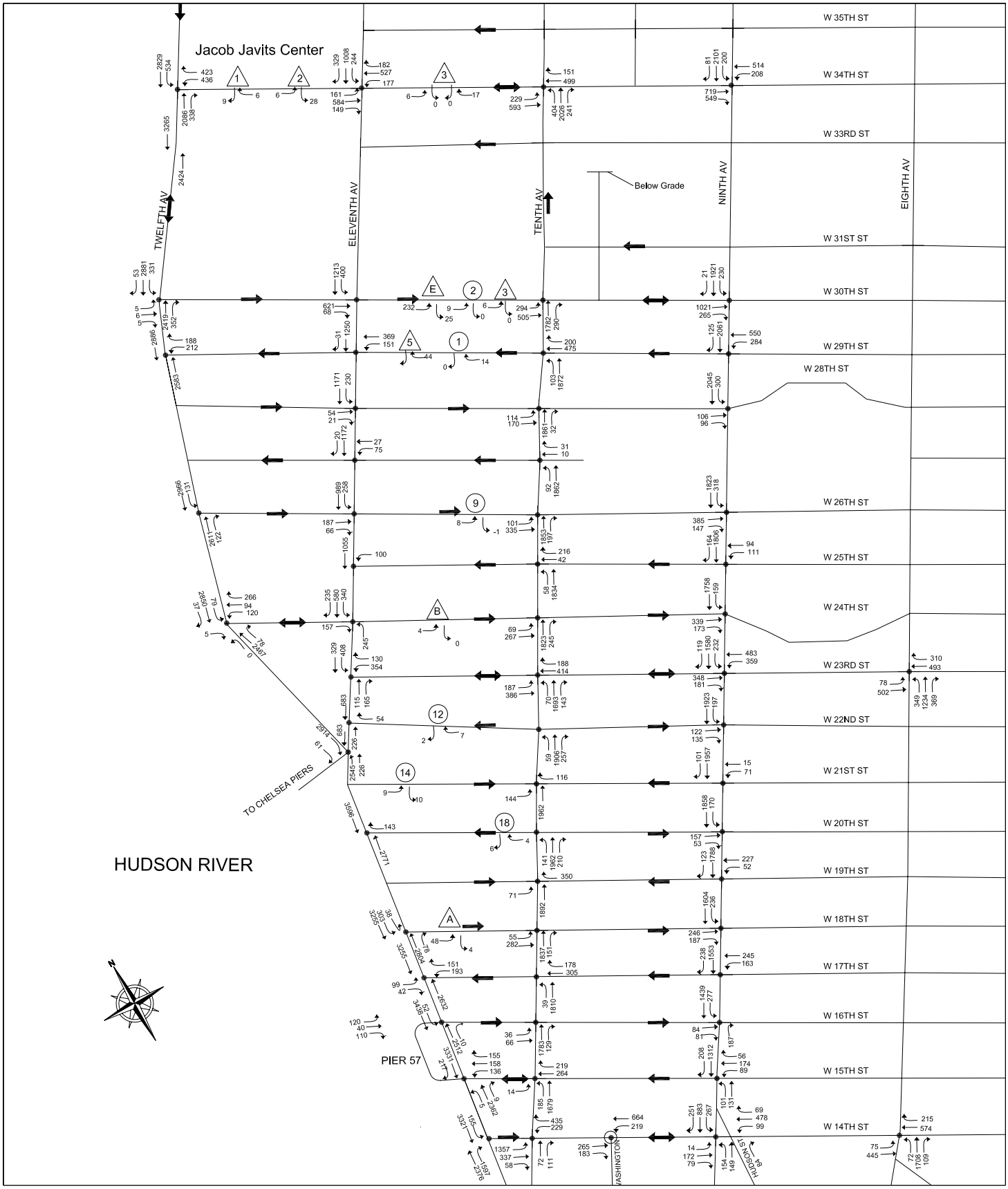
Along the Route 9A corridor, there are ~~two~~ three newly congested intersections in the AM peak hour at W. 34th Street, W. ~~14~~ 16th Street and W. ~~16~~ 14th Street. In the midday, W. 30th Street and Eleventh Avenue are newly congested, as are W. 34th Street, W. 30th Street, W. 29th Street, W. 16th Street and W. 15th Street in the PM.

Along the Eleventh Avenue corridor, there are no new intersections with one or more congested movements in the AM, ~~midday or PM peak hours~~ In the midday and PM peak hours W. 34th Street has newly congested approaches.

To the east along the Tenth Avenue corridor, new intersections with one or more congested movements would include W. 26th Street and W. 14th Street in the AM peak hour. In the midday and PM peak hours, there are no newly congested intersections.

Along the Ninth Avenue corridor, W. 34th Street, W. 30th Street and W. 29th Street are newly congested intersections in the AM, while in the midday, W. 34th Street, W. 30th Street, W. 29th Street, W. 28th Street and W. 17th Street would be newly congested. In the PM peak hour, Table 16-4 shows that the W. 34th Street, W. 26th Street and W. 16th Street intersections would become newly congested, with one or more congested movements.

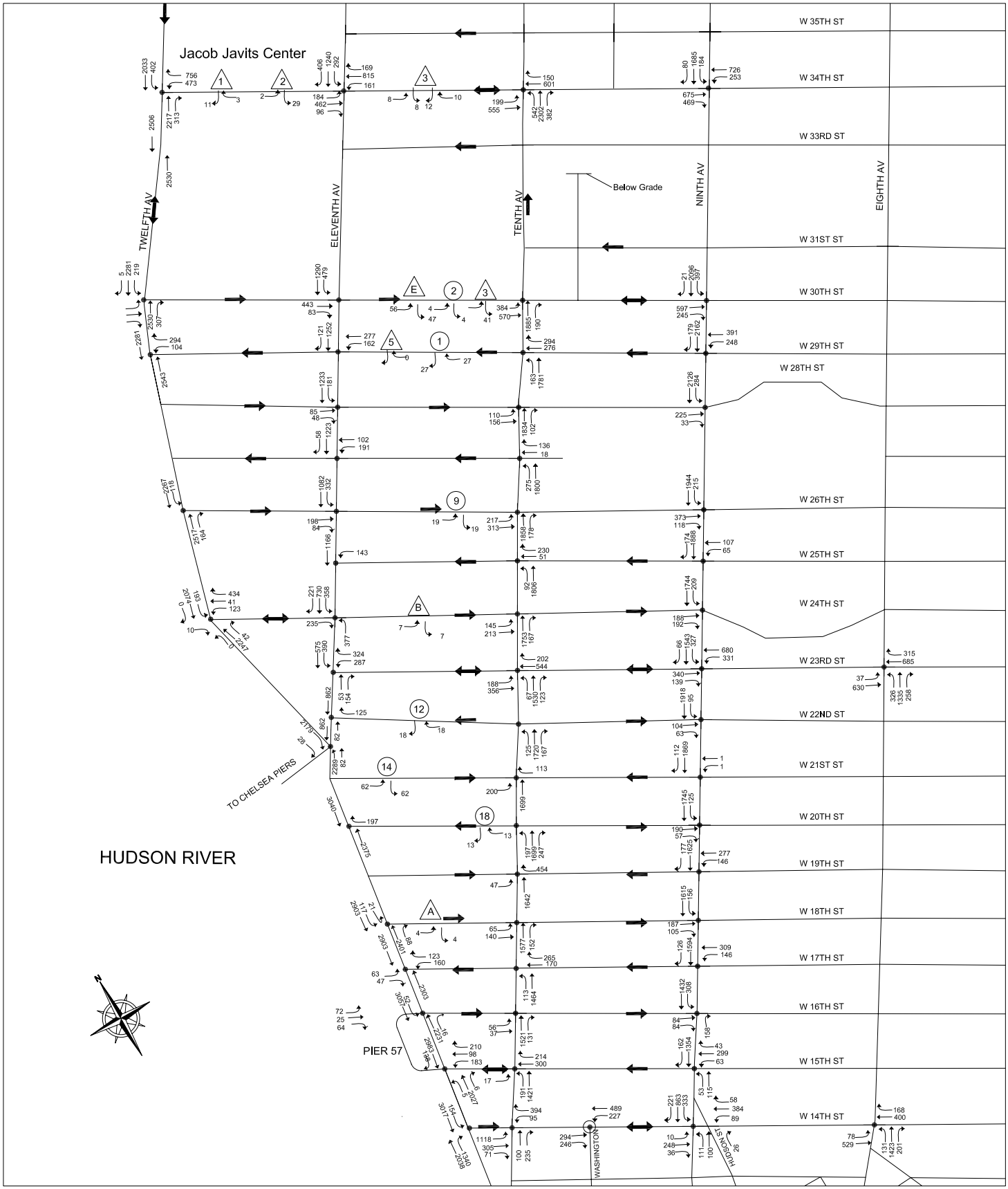
Figure 16-6
2013 No-Action Traffic Volumes AM Peak Hour
THIS FIGURE HAS BEEN REVISED FOR THE FEIS



LEGEND:

- ◉ Analyzed Unsignalized Intersection
- • Analyzed Signalized Intersection
- 1 No-Action Development Site
- B Planned No-Action Development Site
- 18 Projected Development Site

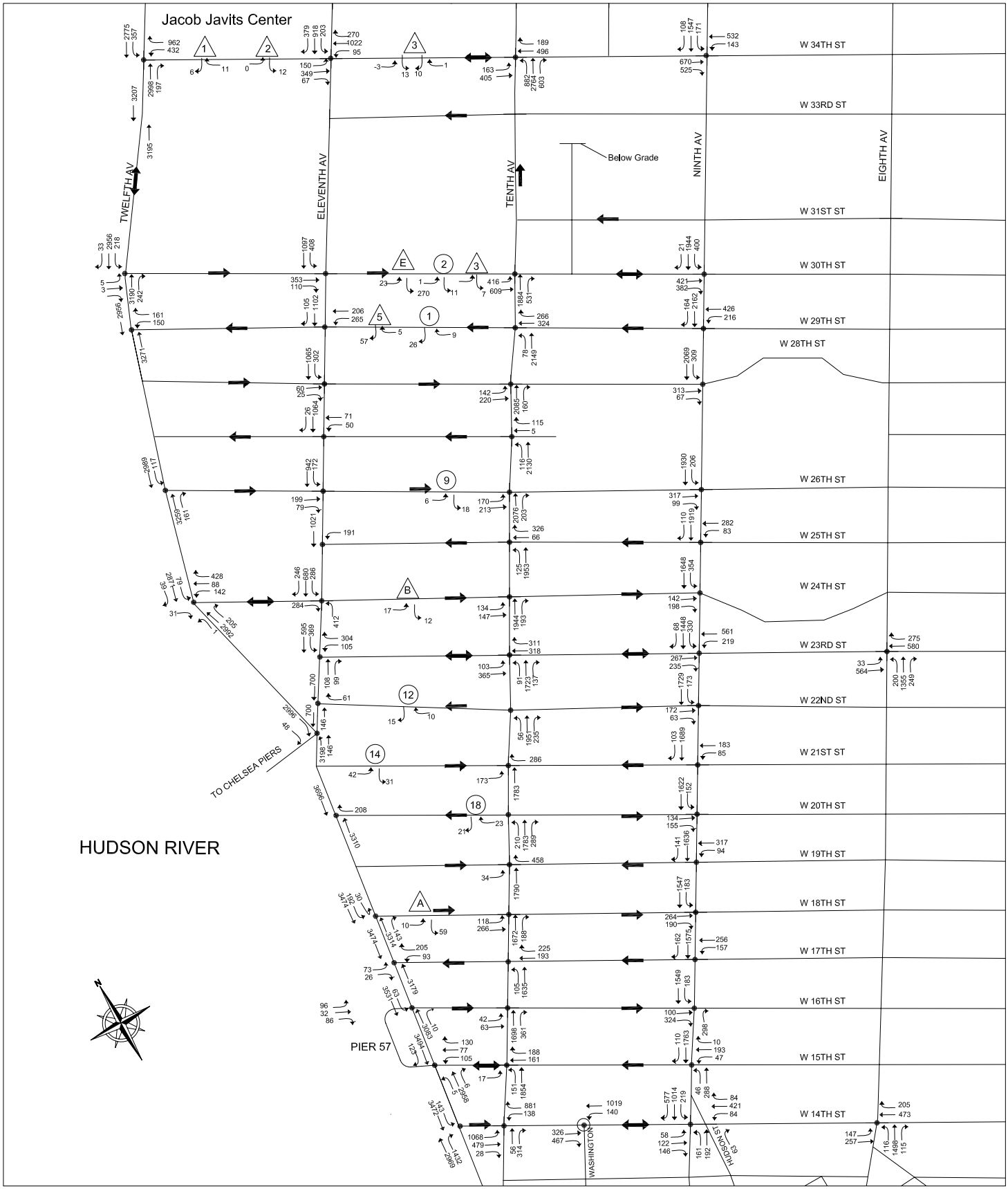
Figure 16-7
2013 No-Action Traffic Volumes MD Peak Hour
THIS FIGURE HAS BEEN REVISED FOR THE FEIS



LEGEND:

- ◉ Analyzed Unsignalized Intersection
- • Analyzed Signalized Intersection
- △1 No-Action Development Site
- △B Planned No-Action Development Site
- (18) Projected Development Site

Figure 16-8
2013 No-Action Traffic Volumes PM Peak Hour
THIS FIGURE HAS BEEN REVISED FOR THE FEIS



LEGEND:

- ◉ Analyzed Unsignalized Intersection
- • Analyzed Signalized Intersection
- 1 No-Action Development Site
- B Planned No-Action Development Site
- 18 Projected Development Site

Table 16-4
2013 No-Action Traffic Conditions
THIS TABLE HAS BEEN REVISED FOR FEIS

ANALYZED INTERSECTIONS	LANE GROUP	2004 Existing AM Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION AM Peak Hour V/C Ratio	Delay (Sec)	LOS		2004 Existing MD Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION MD Peak Hour V/C Ratio	Delay (Sec)	LOS		2004 Existing PM Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION PM Peak Hour V/C Ratio	Delay (Sec)	LOS	
W.34th Street (WB) @	WB - L	0.40	54.6	D		0.75	53.3	D		0.35	38.8	D		0.85	41.9	D		0.16	36.3	D		0.81	50.8	D	
12th Avenue (N-S)	WB - R	0.42	35.3	D		0.35	25.2	C		0.75	37.7	D		0.55	15.2	B		0.86	53.4	D		0.90	42.5	D	
(Route 9A)	NB - T	0.61	17.9	B		0.72	16.3	B		0.75	8.8	A		1.01	38.0	D	*	0.88	6.9	A		0.98	24.9	C	*
	NB - R	0.33	15.2	B		0.53	32.4	C		0.31	18.3	B		0.69	32.3	C		0.17	13.4	B		0.29	20.3	C	
	SB - L	0.40	20.3	C		0.64	39.7	D		0.91	79.0	E	*	0.36	26.5	C		0.30	20.0	B		0.33	43.2	D	
	SB - T	0.66	2.8	A		0.95	23.4	C	*	0.59	2.4	A		0.77	4.0	A		0.81	7.6	A		0.93	18.1	B	
W. 30th Street (EB) @	EB - LTR	0.05	53.7	D		0.06	54.7	D		0.00	38.4	D		0.00	38.4	D		0.04	43.9	D		0.03	43.8	D	
12th Avenue (N-S)	NB - TR	0.65	9.2	A		0.72	10.3	B		0.77	20.5	C		0.84	23.0	C		0.79	3.7	A		0.85	4.7	A	
(Route 9A)	SB - L	0.97	103.9	F	*	1.21	178.2	F	*	0.60	50.7	D		0.90	80.7	F	*	0.71	52.1	D		0.93	82.2	F	*
	SB - TR	0.71	3.1	A		0.79	3.8	A		0.61	2.3	A		0.69	2.8	A		0.70	2.9	A		0.81	4.0	A	
						WB - L	0.54	61.1	E	*												WB-L	0.32	39.00	D	
W. 29th Street (WB) @	WB - LR	0.82	85.7	F	*	WB - LR	0.41	56.2	E	*	0.45	45.8	D		0.64	51.0	D		0.30	42.1	D		0.26	37.7	D	
12th Avenue (N-S)	WB - R	0.71	74.6	E	*	WB - R	0.48	58.7	E	*	0.67	53.7	D		0.72	55.0	D		0.38	43.6	D		0.32	39.1	D	
(Route 9A)	NB - T	0.52	2.2	A		NB - T	0.59	2.6	A		0.63	2.4	A		0.69	2.8	A		0.77	3.4	A		0.87	5.2	A	
	SB - T	0.74	3.5	A		SB - T	0.85	5.5	A		0.68	2.9	A		0.80	4.3	A		0.83	6.6	A		1.01	25.9	C	*
W. 26th Street (E-W) @	NB - TR	0.59	3.1	A		0.68	3.7	A		0.68	2.7	A		0.72	3.0	A		0.76	3.3	A		0.83	4.1	A	
12th Avenue (N-S)	SB - L	0.36	52.2	D		0.38	52.8	D		0.27	39.3	D		0.33	40.5	D		0.27	39.2	D		0.31	40.0	D	
(Route 9A)	SB - T	0.84	5.6	A		0.94	10.0	A		0.67	2.9	A		0.77	3.9	A		0.78	6.6	A		0.92	11.2	B	
W. 24th Street (E-W) @	EB - R	0.02	50.2	D		0.02	52.4	D		0.04	37.3	D		0.04	37.3	D		0.08	36.4	D		0.09	36.5	D	
12th Avenue (N-S)	WB - L	0.30	55.6	E	*	0.31	58.1	E	*	0.22	39.3	D		0.24	39.7	D		0.36	41.1	D		0.40	42.0	D	
(Route 9A)	WB - LTR	0.51	60.8	E	*	0.51	63.4	E	*	0.26	40.1	D		0.28	40.5	D		0.22	38.4	D		0.23	38.5	D	
	WB - R	1.03	122.9	F	*	1.14	164.0	F	*	1.00	92.8	F	*	1.07	111.6	F	*	1.02	97.5	F	*	1.12	126.2	F	*
	NB - TR	0.70	4.2	A		0.81	10.4	B		0.89	8.9	A		0.97	15.6	B	*	1.03	44.1	D	*	1.11	73.9	E	*
	SB - L	0.88	95.4	F	*	0.36	46.8	D		0.99	107.4	F	*	1.09	137.0	F	*	0.39	54.4	D		0.40	54.9	D	
	SB - TR	0.78	4.1	A		0.77	3.7	A		0.63	2.9	A		0.74	3.8	A		0.86	16.4	B		1.01	34.7	C	*
12th Avenue (SB) @	WB - T	0.80	63.3	E	*	0.94	78.5	E	*	0.84	49.9	D		1.05	85.9	F	*	0.56	39.8	D		0.80	48.0	D	
11th Avenue (WB)	NB - T	0.69	6.0	A		0.79	7.6	A		0.77	10.9	B		0.85	13.0	B		0.96	11.5	B	*	1.04	32.4	C	*
	NB - R	0.51	49.9	D		0.71	59.4	E	*	0.10	26.8	C		0.22	28.6	C		0.22	28.6	C		0.34	30.8	C	
	SB - TR	0.82	5.1	A		0.91	8.0	A		0.68	9.3	A		0.79	11.4	B		0.87	13.6	B		1.02	33.1	C	*
W. 34th Street (E-W) @																									
11th Avenue (SB)	EB-TR	0.94	54.8	D		0.62	21.7	C		0.61	35.2	D		0.56	23.7	C		0.66	3.4	A		0.71	117.0	F	*
	WB - Defl	1.04	129.4	F	*	0.70	32.4	C																	
	WB - TR	0.75	39.8	D		0.63	20.1	C		WB- LTR	1.02	69.5	E	*	WB- LTR	0.69	17.8	B		WB- LTR	0.83	42.6	D		WB- LTR	0.92	31.1	C	
	SB - LT	0.33	3.5	A		0.76	22.6	C		0.51	7.1	A		1.02	48.8	D	*	0.30	3.4	A		0.73	23.5	C	
W.30th Street (EB) @	EB - TR	0.38	17.8	B		0.69	23.7	C		0.36	17.5	B		0.57	20.9	C		0.33	17.2	B		0.53	22.1	C	
11th Avenue (SB)	SB - LT	0.51	16.0	B		0.71	18.9	B		0.61	17.2	B		0.52	15.8	B		0.41	14.8	B		0.47	13.1	B	
W.29th Street (WB) @	WB - LT	0.44	18.5	B		0.48	19.1	B		0.32	16.9	B		0.44	18.5	B		0.29	16.6	B		0.46	18.9	B	
11th Avenue (SB)	SB - TR	0.53	16.3	B		0.62	17.5	B		0.54	16.3	B		0.68	18.4	B		0.40	14.8	B		0.57	16.7	B	

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Congested Intersections (LOS E or F, or V/C > 0.95)

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-4
2013 No-Action Traffic Conditions

THIS TABLE HAS BEEN REVISED FOR FEIS

ANALYZED INTERSECTIONS	LANE GROUP	2004 Existing AM Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION AM Peak Hour V/C Ratio	Delay (Sec)	LOS		2004 Existing MD Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION MD Peak Hour V/C Ratio	Delay (Sec)	LOS		2004 Existing PM Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION PM Peak Hour V/C Ratio	Delay (Sec)	LOS	
W.28th Street (EB) @	EB - TR	0.07	17.6	B		0.15	18.5	B		0.23	19.6	B		0.29	20.3	C		0.13	18.3	B		0.17	18.8	B	
11th Avenue (SB)	SB - LT	0.52	12.5	B		0.60	13.4	B		0.48	12.0	B		0.62	13.6	B		0.40	11.2	B		0.56	12.9	B	
W.27th Street (WB) @	WB-LT	0.11	20.4	C		0.11	20.4	C		0.32	22.7	C		0.36	23.1	C		0.12	20.4	C		0.13	20.6	C	
11th Avenue (SB)	SB-TR	0.39	8.6	A		0.45	9.1	A		0.41	8.8	A		0.51	9.6	A		0.29	7.9	A		0.41	8.8	A	
W.26th Street (EB) @	EB - TR	0.61	39.1	D		0.46	31.6	C		0.67	40.6	D		0.50	32.2	C		0.72	45.0	D		0.83	50.0	D	
11th Avenue (SB)	SB - LT	0.35	3.6	A		0.40	3.9	A		0.38	3.8	A		0.47	4.2	A		0.23	3.2	A		0.35	5.1	A	
W.25th Street (WB) @	WB - L	0.17	24.7	C		0.21	25.2	C		0.26	26.1	C		0.36	27.6	C		0.33	27.1	C		0.42	28.7	C	
11th Avenue (SB)	SB - T	0.32	5.4	A		0.36	5.6	A		0.26	5.1	A		0.32	5.4	A		0.22	4.9	A		0.32	5.4	A	
W.24th Street (EB) @	EB-R	0.23	25.8	C		0.25	26.8	C		0.38	28.5	C		0.39	28.8	C		0.43	29.4	C		0.45	29.7	C	
11th Avenue (N-S)	NB-L	0.32	26.8	C		0.35	28.0	C		0.53	30.9	C		0.57	31.8	C		0.55	31.4	C		0.61	32.7	C	
	SB-TR	0.65	30.7	C		0.75	33.3	C		0.74	33.3	C		0.90	41.9	D		0.63	30.3	C		0.87	39.2	D	
W.23rd Street (E-W) @	WB - L	0.57	22.8	C		0.68	27.8	C		0.43	19.2	B		0.53	23.2	C		0.13	15.1	B		0.18	17.5	B	
11th Avenue (N-S)	WB - R	0.27	17.2	B		0.30	18.9	B		0.40	18.3	B		0.46	21.2	C		0.62	24.8	C		0.71	31.0	C	
	NB - TR	0.19	15.5	B		0.24	14.9	B		0.13	12.7	B		0.18	11.0	B		0.11	12.5	B		0.16	10.9	B	
	SB - L	0.79	33.2	C		0.93	51.2	D		0.68	26.5	C		0.83	34.2	C		0.52	21.2	C		0.68	24.8	C	
	SB -T	0.21	15.7	B		0.25	14.9	B		0.37	14.9	B		0.45	13.6	B		0.34	14.5	B		0.45	13.6	B	
W.22nd Street (WB) @	WB - R	0.04	10.8	B		0.04	10.8	B		0.09	12.9	B		0.10	13.0	B		0.03	12.4	B		0.05	12.5	B	
11th Avenue (N-S)	NB - T	0.28	49.0	D		0.39	51.0	D		0.06	32.2	C		0.12	32.9	C		0.13	33.0	C		0.20	33.9	C	
W.20th Street (WB) @	WB - R	0.34	50.3	D		0.40	51.7	D		0.19	32.5	C		0.31	34.3	C		0.23	33.1	C		0.31	34.3	C	
11th Avenue (N-S)	NB - T	0.57	3.8	A		0.67	4.5	A		0.56	2.5	A		0.66	2.8	A		0.80	4.0	A		0.88	5.6	A	
(Route 9A)	SB - T	0.83	4.9	A		0.94	8.8	A		0.99	18.8	B	*	1.18	96.4	F	*	0.96	20.6	C	*	1.17	92.6	F	*
W. 18th Street (EB) @	NB - TR	0.72	5.2	A		0.85	7.7	A		0.86	6.1	A		0.96	13.0	B	*	0.99	16.6	B	*	1.09	53.3	D	*
11th Avenue (N-S)	SB - L	0.82	71.0	E	*	0.88	78.6	E	*	0.22	33.1	C		0.30	34.5	C		0.44	37.3	D		0.47	38.2	D	
(Route 9A)	SB - T	0.85	5.6	A		0.96	11.4	B	*	0.95	11.4	B	*	1.13	74.2	E	*	0.90	7.3	A		1.11	63.2	E	*
W. 17th Street (E-W) @	EB - L	0.68	91.5	F	*	0.70	92.9	F	*	0.14	44.8	D		0.14	44.9	D		0.26	53.7	D		0.27	53.9	D	
11th Avenue (N-S)	EB - R	0.32	73.2	E	*	0.33	73.5	E	*	0.11	44.6	D		0.12	44.7	D		0.15	52.8	D		0.15	52.9	D	
(Route 9A)	WB - L	0.69	82.5	F	*	1.18	190.4	F	*	0.98	132.0	F	*	1.50	316.0	F	*	0.23	45.5	D		0.42	50.2	D	
	WB - R	0.77	93.4	F	*	1.03	144.3	F	*	0.98	132.0	F	*	1.15	182.9	F	*	0.74	63.9	E	*	0.80	69.2	E	*
	NB -T	0.72	3.7	A		0.78	4.2	A		0.78	4.4	A		0.88	6.8	A		0.92	7.9	A		1.01	21.8	C	*
	SB - T	0.95	14.2	B	*	0.98	17.5	B	*	0.99	27.5	C	*	1.18	99.6	F	*	0.90	15.4	B		1.11	66.9	E	*
W.16th Street (EB)	NB - TR	0.66	4.6	A		0.75	5.6	A		0.79	4.5	A		0.86	6.1	A		0.92	16.4	B		0.98	24.2	C	*
11th Avenue (N-S)	SB - L	0.09	1.2	A		0.20	11.9	B		0.09	0.5	A		0.18	9.1	A		0.10	13.9	B		0.18	35.4	D	
(Route 9A)	SB - T	0.88	6.4	A		1.01	23.4	C	*	1.04	41.3	D	*	1.25	134.7	F	*	0.91	15.6	B		1.13	74.5	E	*

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Congested Intersections (LOS E or F, or V/C > 0.95)

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-4
2013 No-Action Traffic Conditions
THIS TABLE HAS BEEN REVISED FOR FEIS

		2004 Existing				2013 NO-ACTION				2004 Existing				2013 NO-ACTION				2004 Existing				2013 NO-ACTION			
		AM Peak Hour				AM Peak Hour				MD Peak Hour				MD Peak Hour				PM Peak Hour				PM Peak Hour			
ANALYZED INTERSECTIONS	LANE GROUP	V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS	
W. 15th Street (E-W) @	WB - LTR	0.58	55.5	E	*	0.66	56.8	E	*	0.52	40.4	D		0.58	38.9	D		0.35	35.0	C		0.37	35.0	C	
11th Avenue (N-S)	NB - LTR	0.72	5.5	A		0.75	5.8	A		0.76	10.9	B		0.90	16.0	B		0.93	9.0	A		0.99	17.3	B	*
(Route 9A)	SB - TR	0.90	7.2	A		1.08	50.9	D	*	1.04	41.4	D	*	1.28	148.3	F	*	0.91	15.7	B		1.16	88.6	F	*
W.14th Street (EB)	NB - T	0.58	4.0	A		0.66	4.1	A		0.69	9.6	A		0.76	10.7	B		0.86	5.5	A		0.92	16.0	B	
11th Avenue (N-S)	NB - R	0.78	7.7	A		0.89	11.3	B		0.81	22.2	C		0.90	28.5	C		0.81	21.8	C		0.88	26.4	C	
(Route 9A)	SB - L	0.27	6.5	A		0.31	22.9	C		0.24	13.5	B		0.27	18.6	B		0.88	59.2	E	*	0.24	23.0	C	
	SB - T	0.91	7.8	A		1.01	21.4	C	*	1.03	36.9	D	*	1.14	81.9	F	*	0.90	15.1	B		1.11	66.6	E	*
W.34th Street (E-W) @	EB - Defl	0.91	66.3	E	*	0.85	50.9	D		0.88	59.8	E	*	0.92	67.4	E	*	0.90	73.7	E	*	0.81	52.1	D	
10th Avenue (NB)	EB - T	0.30	23.1	C		0.62	26.2	C		0.37	21.3	C		0.63	25.9	C		0.29	23.0	C		0.41	21.1	C	
	WB - TR	0.46	25.0	C		0.54	24.3	C		0.53	23.4	C		0.63	25.0	C		0.55	26.5	C		0.55	23.1	C	
	NB - LTR	0.51	8.9	A		0.81	15.2	B		0.66	10.6	B		NB-LT 1.18	103.2	F	*	0.60	9.7	A		NB-LTR 1.10	68.7	E	*
										0.23	11.0	B		NB-R 0.65	21.0	C									
W.30th Street (EB) @	EB - LT	0.57	27.4	C		0.64	27.9	C		0.72	31.3	C		0.81	32.3	C		0.50	26.1	C		0.75	28.1	C	
10th Avenue (NB)	NB - TR	0.45	8.4	A		0.61	9.8	A		0.56	9.4	A		0.79	13.6	B		0.57	9.3	A		0.74	14.4	B	
W.29th Street (WB) @	WB - TR	0.70	31.0	C		0.56	26.4	C		0.55	27.3	C		0.79	35.1	D		0.58	27.9	C		0.50	25.5	C	
10th Avenue (NB)	NB - LT	0.44	8.3	A		0.60	9.7	A		0.59	9.8	A		0.79	13.0	B		0.56	9.3	A		0.67	10.6	B	
W.28th Street (EB) @	EB - LT	0.51	28.1	C		0.35	23.8	C		0.47	27.2	C		0.36	24.0	C		0.62	31.3	C		0.45	25.3	C	
10th Avenue (NB)	NB -TR	0.41	8.1	A		0.54	9.1	A		0.58	9.7	A		0.75	12.1	B		0.56	9.3	A		0.65	10.2	B	
W.27th Street (WB) @	WB-TR	0.05	20.5	C		0.06	20.5	C		0.14	21.2	C		0.15	21.3	C		0.17	21.7	C		0.17	21.8	C	
10th Avenue (NB)	NB-LT	0.43	8.2	A		0.56	9.3	A		0.63	10.2	B		0.81	13.3	B		0.50	8.7	A		0.59	9.5	A	
W.26th Street (EB) @	EB-LT	0.76	36.9	D		0.97	63.7	E	*	0.97	61.3	E	*	1.20	138.1	F	*	0.63	30.5	C		0.86	45.1	D	
10th Avenue (NB)	NB-TR	0.47	9.7	A		0.60	11.0	B		0.66	12.0	B		0.83	15.6	B		0.58	10.8	B		0.67	11.8	B	
W.25th Street (WB) @	WB-TR	0.50	29.9	C		0.71	37.8	D		0.58	32.4	C		0.85	49.9	D		0.97	69.4	E	*	1.07	97.7	F	*
10th Avenue (NB)	NB-LT	0.41	6.9	A		0.52	7.7	A		0.57	8.2	A		0.71	9.9	A		0.48	7.3	A		0.56	8.0	A	
W.24th Street (EB) @	EB-LT	0.30	23.0	C		0.36	23.7	C		0.33	23.4	C		0.42	24.6	C		0.22	22.1	C		0.31	23.1	C	
10th Avenue (NB)	NB-TR	0.48	8.5	A		0.58	9.5	A		0.61	10.0	A		0.75	12.2	B		0.52	8.9	A		0.60	9.7	A	
W.23rd Street (E-W) @	EB - Defl	0.59	33.7	C		0.68	34.8	C		0.88	67.5	E	*	1.06	109.7	F	*								
10th Avenue (NB)	EB - T	0.36	23.1	C		0.38	20.7	C		0.33	22.8	C		0.39	22.2	C		0.31	22.4	C		0.44	23.4	C	
	WB - T	0.43	24.1	C		0.42	21.4	C		0.63	28.0	C		0.63	26.6	C		0.32	22.6	C		0.34	22.2	C	
	WB -R	0.50	28.5	C		0.50	25.3	C		0.49	27.7	C		0.54	27.4	C		0.78	40.6	D		0.82	43.8	D	
	NB - LTR	0.51	9.5	A		0.68	14.3	B		0.59	10.5	B		0.75	14.5	B		0.50	9.4	A		0.59	10.9	B	

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Congested Intersections (LOS E or F, or V/C > 0.95)

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-4
2013 No-Action Traffic Conditions
THIS TABLE HAS BEEN REVISED FOR FEIS

ANALYZED INTERSECTIONS	LANE GROUP	2004 Existing AM Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION AM Peak Hour V/C Ratio	Delay (Sec)	LOS		2004 Existing MD Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION MD Peak Hour V/C Ratio	Delay (Sec)	LOS		2004 Existing PM Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION PM Peak Hour V/C Ratio	Delay (Sec)	LOS	
W.22nd Street (EB) @ 10th Avenue (NB)	NB - LTR	0.61	10.5	B		0.73	12.2	B		0.71	12.2	B		0.85	15.8	B		0.62	10.6	B		0.71	11.8	B	
W.21st Street (E-W) @ 10th Avenue (NB)	EB - L	0.13	21.2	C		0.16	21.5	C		0.14	21.3	C		0.23	22.3	C		0.15	21.4	C		0.20	21.9	C	
	WB - R	0.26	23.3	C		0.28	23.7	C		0.14	21.4	C		0.18	21.8	C		0.65	33.2	C		0.71	35.8	D	
	NB - T	0.50	8.8	A		0.61	9.8	A		0.59	9.8	A		0.69	11.1	B		0.43	8.2	A		0.49	8.7	A	
W.20th Street (EB) @ 10th Avenue (NB)	NB - LTR	0.60	9.8	A		0.72	11.2	B		0.75	12.1	B		0.88	16.4	B		0.57	9.3	A		0.65	10.2	B	
W.19th Street (E-W) @ 10th Avenue (NB)	EB - L	0.11	21.2	C		0.16	21.8	C		0.09	21.0	C		0.11	21.2	C		0.06	20.7	C		0.07	20.7	C	
	WB - R	0.50	26.6	C		0.57	28.0	C		0.57	28.1	C		0.74	33.9	C		0.60	28.8	C		0.70	32.1	C	
	NB - T	0.50	8.8	A		0.60	9.7	A		0.56	9.4	A		0.64	10.4	B		0.42	8.1	A		0.48	8.6	A	
W.18th Street (EB) @ 10th Avenue (NB)	EB - LT	0.32	23.1	C		0.34	23.4	C		0.19	21.7	C		0.22	22.1	C		0.29	22.8	C		0.37	23.8	C	
	NB - TR	0.51	8.8	A		0.60	9.7	A		0.60	9.9	A		0.69	11.0	B		0.47	8.5	A		0.51	8.8	A	
W.17th Street (WB) @ 10th Avenue (NB)	WB - TR	0.47	25.7	C		0.62	28.8	C		0.46	25.5	C		0.61	28.6	C		0.47	25.7	C		0.55	27.1	C	
	NB - LT	0.46	8.5	A		0.56	9.3	A		0.55	9.4	A		0.62	10.1	B		0.43	8.2	A		0.47	8.5	A	
W.16th Street (EB) @ 10th Avenue (NB)	EB - LT	0.13	21.4	C		0.23	22.7	C		0.08	20.7	C		0.11	21.0	C		0.07	20.7	C		0.11	21.0	C	
	NB - TR	0.51	8.9	A		0.59	9.7	A		0.59	9.8	A		0.65	10.5	B		0.55	9.1	A		0.59	9.5	A	
W.15th Street (E-W) @ 10th Avenue (NB)	EB - L	0.05	17.5	B		0.06	17.7	B		0.07	17.8	B		0.07	17.8	B		0.04	17.3	B		0.06	17.5	B	
	WB - TR	0.49	22.7	C		0.57	24.3	C		0.56	24.0	C		0.63	25.5	C		0.37	20.8	C		0.42	21.5	C	
	NB - LT	0.49	12.0	B		0.61	13.3	B		0.62	13.6	B		0.71	15.1	B		0.60	13.1	B		0.66	13.9	B	
W.14th Street (E-W) @ 10th Avenue (NB)	EB - L	0.91	36.3	D		1.06	68.8	E	*	0.80	29.3	C		0.89	34.9	C		0.73	26.9	C		0.81	29.7	C	
	EB - T	0.29	19.5	B		0.30	19.7	B		0.26	19.3	B		0.28	19.4	B		0.39	20.8	C		0.41	21.0	C	
	EB - R	0.09	17.7	B		0.10	17.9	B		0.11	17.9	B		0.14	18.3	B		0.04	17.2	B		0.05	17.3	B	
	WB - L	0.74	36.3	D		0.86	49.1	D		0.33	21.5	C		0.42	23.8	C		0.98	67.8	E	*	1.08	98.3	F	*
	WB - R	0.52	24.3	C		0.68	29.0	C		0.69	30.6	C		0.78	35.1	D		0.97	55.8	E	*	1.03	72.2	E	*
	NB - TR	0.07	11.7	B		0.10	11.9	B		0.20	9.8	A		0.22	10.0	B		0.21	9.9	A		0.23	10.1	B	
W.34th Street (EB) @ 9th Avenue (SB)	EB-TR	0.72	29.4	C		1.19	123.6	F	*	0.69	29.4	C		1.10	85.1	F	*	0.54	26.4	C		1.24	146.2	F	*
	WB - DefL	0.35	22.5	C		0.72	45.6	D		0.59	31.5	C		0.92	67.2	E	*	0.32	18.7	B		0.49	34.6	C	
	WB - T	0.33	14.2	B		0.41	15.1	B		0.52	16.6	B		0.55	15.4	B		0.35	14.4	B		0.42	15.3	B	
	SB - LTR	0.73	23.1	C		1.03	50.0	D	*	0.81	25.9	C		0.95	37.4	D	*	0.61	21.2	C		0.78	24.3	C	
W.30th Street (EB) @ 9th Avenue (SB)	EB-TR	0.89	39.6	D		1.18	119.2	F	*	0.58	27.5	C		0.79	33.3	C		0.41	25.0	C		0.80	34.5	C	
	SB-LTR	0.61	14.0	B		0.71	15.5	B		0.75	16.7	B		1.10	69.3	E	*	0.55	13.3	B		0.78	16.9	B	
W.29th Street (WB) @ 9th Avenue (SB)	WB-LT	0.87	39.7	D		1.02	64.7	E	*	0.62	28.6	C		0.83	36.6	D		0.65	29.3	C		0.78	33.9	C	
	SB-TR	0.58	9.5	A		0.67	10.5	B		0.71	11.5	B		0.97	24.9	C	*	0.51	8.8	A		0.71	11.2	B	

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Congested Intersections (LOS E or F, or V/C > 0.95)

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-4
2013 No-Action Traffic Conditions
THIS TABLE HAS BEEN REVISED FOR FEIS

		2004 Existing				2013 NO-ACTION				2004 Existing				2013 NO-ACTION				2004 Existing				2013 NO-ACTION			
		AM Peak Hour				AM Peak Hour				MD Peak Hour				MD Peak Hour				PM Peak Hour				PM Peak Hour			
ANALYZED INTERSECTIONS	**LANE GROUP**	**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**	
W.28th Street (EB) @	EB-TR	0.27	22.8	C		0.28	23.0	C		0.33	23.6	C		0.36	24.0	C		0.45	25.3	C		0.51	26.4	C	
9th Avenue (SB)	SB-LT	0.61	9.8	A		0.69	10.8	B		0.72	11.5	B		0.96	22.8	C	*	0.52	8.9	A		0.70	10.9	B	
W.26th Street (EB) @	EB-TR	1.03	80.2	F	*	1.24	155.2	F	*	1.02	76.7	E	*	1.17	129.2	F	*	0.85	47.2	D		1.02	79.6	E	*
9th Avenue (SB)	SB-LT	0.55	9.1	A		0.62	9.9	A		0.66	10.6	B		0.84	14.5	B		0.48	8.6	A		0.62	9.9	A	
W.25th Street (WB) @	WB-LT	0.19	24.7	C		0.29	25.8	C		0.18	24.5	C		0.25	25.3	C		0.44	27.9	C		0.49	28.6	C	
9th Avenue (SB)	SB-T	0.41	5.8	A		0.47	6.2	A	SB-TR	0.59	7.3	A	SB-TR	0.75	9.3	A		SB-TR	0.41	5.8	A	SB-TR	0.55	6.7	A	
	SB-R	0.20	5.3	A		0.22	5.4	A																	
W.24th Street (EB) @	EB-TR	1.01	74.8	E	*	1.10	100.4	F	*	0.74	37.3	D		0.90	51.4	D		0.64	32.9	C		0.77	39.4	D	
9th Avenue (SB)	SB-LT	0.49	8.1	A		0.56	8.7	A		0.62	9.5	A		0.77	11.9	B		0.45	7.7	A		0.59	8.9	A	
W.23rd Street (E-W) @	EB-TR	0.62	30.9	C		0.72	33.8	C		0.61	30.7	C		0.71	33.7	C		0.54	29.0	C		0.68	32.7	C	
9th Avenue (SB)	WB-DefL	1.02	85.4	F	*	1.12	115.9	F	*	0.91	57.6	E	*	1.01	80.0	E	*	0.55	22.4	C		0.74	38.2	D	
	WB-T	0.38	17.6	B		0.41	16.8	B		0.56	20.3	C		0.57	18.7	B		0.43	18.3	B		0.48	19.0	B	
	SB-LTR	0.77	20.4	C		0.93	30.3	C		0.73	19.5	B		1.00	43.7	D	*	SB-LT	0.56	16.5	B	SB-LT	0.77	20.1	C	
																		SB-R	0.12	15.0	B	SB-R	0.12	15.1	B	
W.22nd Street (EB) @	EB-TR	0.56	29.1	C		0.61	30.4	C		0.39	24.7	C		0.40	25.1	C		0.50	27.1	C		0.52	27.7	C	
9th Avenue (SB)	SB-LT	0.70	12.0	B		0.80	14.0	B		0.64	11.0	B		0.78	13.4	B		0.54	9.8	A		0.68	11.5	B	
W.21st Street (WB) @	WB-LT	0.07	17.4	B		0.08	17.5	B		0.00	16.8	B		0.00	16.8	B		0.26	19.3	B		0.28	19.5	B	
9th Avenue (SB)	SB-TR	0.74	15.7	B		0.85	18.7	B		0.69	14.6	B		0.84	18.3	B		0.54	12.6	B		0.70	14.7	B	
W.20th Street (EB) @	EB-TR	0.23	19.0	B		0.24	19.1	B		0.26	19.4	B		0.28	19.6	B		0.31	19.9	B		0.33	20.2	C	
9th Avenue (SB)	SB-LT	0.70	14.9	B		0.81	17.2	B		0.63	13.7	B		0.76	16.1	B		0.53	12.5	B		0.68	14.5	B	
W.19th Street (WB) @	WB-LT	0.25	19.1	B		0.26	19.3	B		0.40	21.0	C		0.43	21.4	C		0.37	20.5	C		0.39	20.8	C	
9th Avenue (SB)	SB-TR	0.66	14.2	B		0.76	16.1	B		0.60	13.3	B		0.74	15.6	B		0.53	12.5	B		0.69	14.6	B	
W.18th Street (EB) @	EB-TR	0.47	22.2	C		0.49	22.7	C		0.33	20.3	C		0.36	20.7	C		0.47	22.2	C		0.50	22.8	C	
9th Avenue (SB)	SB-LT	0.64	13.9	B		0.73	15.4	B		0.63	13.7	B		0.72	15.2	B		0.53	12.5	B		0.66	14.2	B	
W.17th Street (WB) @	WB-LT	0.79	36.4	D		0.84	40.4	D		0.85	41.4	D		0.97	58.6	E	*	0.38	20.7	C		0.40	21.0	C	
9th Avenue (SB)	SB-TR	0.63	13.7	B		0.72	15.3	B		0.60	13.3	B		0.71	15.0	B		0.53	12.5	B		0.67	14.3	B	
W.16th Street (EB) @	EB-TR	0.32	30.8	C		0.33	31.0	C		0.34	31.2	C		0.35	31.4	C		0.86	51.0	D		0.90	55.9	E	*
9th Avenue (N-S)	NB-R	0.18	11.1	B		0.19	11.2	B		0.16	13.7	B		0.17	13.7	B		0.29	15.0	B		0.31	15.1	B	
	SB-L	0.26	4.8	A		0.27	4.9	A		0.30	5.2	A		0.31	5.3	A		0.17	4.3	A		0.18	4.4	A	
	SB-T	0.37	1.3	A		0.40	1.3	A		0.36	1.2	A		0.41	1.3	A		0.34	1.2	A		0.42	1.4	A	

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Congested Intersections (LOS E or F, or V/C > 0.95)

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-4
2013 No-Action Traffic Conditions
THIS TABLE HAS BEEN REVISED FOR FEIS

		2004 Existing				2013 NO-ACTION				2004 Existing				2013 NO-ACTION				2004 Existing				2013 NO-ACTION			
		AM Peak Hour				AM Peak Hour				MD Peak Hour				MD Peak Hour				PM Peak Hour				PM Peak Hour			
ANALYZED INTERSECTIONS	**LANE GROUP**	**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**	
W.15th Street (WB) @ 9th Avenue (N-S)	WB-LTR	0.50	35.4	D		0.63	38.4	D		0.77	44.7	D		0.87	53.0	D		0.43	34.2	C		0.50	35.4	D	
	NB-DefL	0.21	10.4	B		0.24	12.9	B		0.11	7.8	A		0.13	10.0	A									
	NB-T	0.06	0.9	A		0.06	0.9	A		0.06	0.9	A		0.06	0.9	A		NB-LT 0.14	1.0	A		NB-LT 0.15	1.0	A	
	SB-TR	0.56	13.5	B		0.61	14.2	B		0.57	13.7	B		0.65	14.8	B		0.63	14.4	B		0.75	16.6	B	
W.14th Street (E-W) @ 9th Avenue (N-S)	EB-LTR	0.59	36.7	D		0.82	54.8	D		0.67	39.2	D		0.66	38.2	D		1.00	85.6	F	*	1.11	120.4	F	*
	WB - LTR	1.03	70.3	E	*	1.08	97.7	F	*	1.00	75.7	E	*	1.06	90.1	F	*	1.03	81.7	F	*	1.14	118.9	F	*
	NB-LTR	0.27	31.8	C		0.40	35.4	D		0.26	32.6	C		0.45	40.0	D		0.35	33.3	C		0.39	33.7	C	
	SB-LT	0.79	32.3	C		0.72	22.4	C		0.81	30.8	C		0.82	26.3	C		0.71	27.4	C		0.93	39.1	D	
	SB - R	0.35	29.7	C		0.28	16.3	B		0.32	22.9	C		0.28	19.1	B		0.79	35.3	D		0.83	37.6	D	
W.23rd Street (E-W) @ 8th Avenue (NB)	EB - LT	0.66	27.1	C		0.85	36.9	D		0.76	30.8	C		0.93	44.3	D		0.39	21.1	C		0.67	26.5	C	
	WB-T	0.73	28.1	C		0.87	35.6	D	WB-TR	0.89	36.9	D	WB-TR	1.06	74.1	E	*	0.71	27.2	C	WB-TR	0.83	32.3	C	
	NB - LTR	0.60	18.5	B		0.72	20.3	C		0.87	25.8	C		0.99	40.2	D	*	0.63	19.0	B		0.72	20.4	C	
W.14th Street (E-W) @ 8th Avenue (NB)																		EB-DefL 0.69	39.5	D		EB-DefL 0.80	53.2	D	
	EB - LT	0.71	29.0	C		0.81	34.4	C		0.77	30.7	C	EB-LT	0.85	36.3	D		EB - LT 0.44	22.8	C		EB - LT 0.47	23.4	C	
	WB - TR	0.78	30.6	C		0.91	40.8	D		0.64	25.8	C		0.70	27.6	C		0.75	29.6	C		WB - TR 0.81	32.6	C	
	NB - LTR	0.49	11.9	B		0.58	12.9	B		0.70	18.9	B		0.78	20.9	C		0.41	12.2	B		NB - LTR 0.56	12.7	B	
W.14th Street (E-W) @ Washington Street (SB) (Unsignalized)	WB- LT	0.25	10.4	B		0.27	10.7	B		0.31	11.5	B		0.33	11.9	B		0.22	12.1	B		0.24	12.5	B	

NOTES:
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .
V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle
LOS - Level of service
* - Denotes Congested Intersections (LOS E or F, or V/C > 0.95)
Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

No analyzed intersections along the Eighth Avenue corridor would become newly congested in the AM, and PM peak hours, whereas W. 23rd Street would be newly congested in the midday peak hour with two congested approaches ~~, in the 2013 future without the proposed action~~.

PARKING

Demand for public parking spaces in the study area is expected to change as a result of new developments as well as background growth. Seven existing public parking facilities (Nos. 1, 6, 7, 8, 9, 10 and 28 in Figure 16-5) with about 638 spaces would be displaced by No-Action development. In addition, it is assumed that several No-Action projects would provide as-of-right accessory parking thereby reducing public parking demand from these sites. Table 16-5 shows the future No-Action public parking supply and demand in the study area expected for typical weekday midday and overnight period.

The table reflects the loss of both supply and some existing demand at No-Action sites in the study area as well as growth in demand in other areas. Where expected parking demand exceeded the permitted accessory spaces on projected development sites, the excess demand is allocated to the public parking system. As shown in the table, during the weekday midday, demand would reach near the level of the public parking supply with a utilization rate of approximately 97 percent (versus

Table 16-5, 2013 No-Action Public Off-Street Parking Facilities

	Midday Period				Overnight Period			
	Capacity	Public Parking Demand	Available Spaces	Utilization	Capacity	Public Parking Demand	Available Spaces	Utilization
2004 Existing Conditions	5,378	4,632	746	86%	3,648	2,307	1,341	63%
Change	-638	-39	-599	---	-327	-21	-348	---
2013 No-Action Conditions	4,740	4,593	147	97%	3,321	2,328	993	70%

86 percent under Existing conditions). Overnight, ample supply would remain with a utilization rate of approximately 70 percent, even though much of the supply would continue to be closed during the overnight period, as is the case under Existing conditions.

The curbside metered and alternate-side parking spaces in the study area would also have increased use under No-Action conditions. It is expected that the alternate-side parking, already near capacity,

would be at capacity under No-Action conditions, while the metered supply would increase from 90 percent to 95 percent under No-Action conditions.

D. FUTURE WITH THE PROPOSED ACTION

As described in detail in Chapter 1, "Project Description," and noted at the beginning of this chapter, 25 projected development sites and the High Line have been identified and are analyzed herein for future traffic and parking conditions as the RWCDS. The predominant new development would be 4,708\ residential dwelling units along the west side of Tenth Avenue and the east side of Eleventh Avenue. The new residential buildings would have ground floor uses, primarily retail, typical of the Chelsea and West Chelsea neighborhoods. The projected development sites would displace nine parking lots presently occupying these sites. Each site is assumed to provide accessory parking, and it is also assumed, somewhat conservatively, that there would be no new public parking incorporated in the projected development sites.

TRIP GENERATION AND ASSIGNMENT

Trip generation was calculated separately for each land use component related to the proposed action. Under the proposed action, No-Action land uses would be eliminated and redeveloped in the future with residential buildings and ground floor local retail and community facilities. As a result, the trip generation analysis takes credit for trips and parking demands generated by No-Action land uses that would be displaced. Table 16-6 shows the transportation planning assumptions used to estimate the weekday demand for each of the project components and No-Action land uses. Table 16-6 shows the daily trip generation rates, temporal distributions, modal splits, hourly in/out splits, vehicle occupancy, and truck trip generation for all uses.

Table 16-7 shows the net weekday peak-hour person-trip and vehicle-trip forecasts for each component of the proposed action. Table 16-7 shows that on a typical weekday, almost all of the new demand (99 percent) would be generated by the proposed residential and commercial development, with the High Line open space creating negligible traffic and parking demands, Overall, Table 16-7 shows that the proposed action would generate an estimated ~~370~~ 295, ~~916~~ 634, and ~~727~~ 533net vehicle trips (in and out combined) in the weekday AM, midday, and PM peak hours, respectively. As the above travel demand forecast demonstrates, the proposed action would have its heaviest demand during the midday and PM peak hours, with a substantially lower increment in the AM peak hour. The lower AM increment reflects the credit for displaced office and industrial uses, while the approximately ~~292,676~~ 195,215 sf of retail and 198,726 sf of community facility uses added to the study area contribute to the increase in the midday and PM peak hours.

Table 16-6
Transportation Planning Assumptions
THIS TABLE HAS BEEN REVISED FOR THE FEIS

Land Use:	Residential <= 1/4 mi. of subway	Residential 1/4 - 1/2 mi. of subway	Local Retail	Specialized Retail	Office	Storage/Mfg.	Hotel	Community Facility Museum	High Line Open Space
Size/Units:	201 DU	4,507 DU	146,411 GSF	48,804 GSF	-796,947 GSF	-74,818 GSF	-131 rooms	198,726 GSF	5.9 acres
	(1)	(1)	(1)	(2)	(1)	(3)	(5)	(4)	(9)
Trip Generation:	8.075 per du	8.075 per du	205 per 1,000 sf	170 per 1,000 sf	18 per 1,000 sf	11.5 per 1,000 sf	9.4 per room	21 per 1,000 sf	Weekday 220 per acre
Temporal Distribution:	(1)	(1)	(1)	(5)	(1)	(3)	(5)	(4)	(11)
AM	9.1%	9.1%	3.1%	2.3%	11.8%	13.0%	7.5%	1.0%	7.0%
MD	4.7%	4.7%	19.0%	8.7%	14.5%	10.0%	14.4%	16.1%	17.0%
PM	10.7%	10.7%	9.6%	8.9%	13.7%	14.0%	12.8%	13.4%	14.0%
Modal Splits:	(6) AM/MD/PM	(6) AM/MD/PM	(3) AM/MD/PM	(5) AM/MD/PM	(10) AM/PM	(8) MD	(10) AM/PM	MD	(5) AM/PM	MD	(4) AM/MD/PM	(9) AM/MD/PM
Auto	6.0%	8.0%	2.0%	20.0%	18.0%	2.0%	22.0%	2.0%	9.1%	8.1%	35.0%	5.0%
Taxi	6.0%	7.0%	3.0%	10.0%	1.5%	3.0%	1.5%	3.0%	17.5%	14.9%	15.0%	1.0%
Subway	52.0%	49.0%	6.0%	20.0%	50.0%	6.0%	50.0%	6.0%	24.2%	12.8%	25.0%	3.0%
Bus	9.0%	10.0%	6.0%	25.0%	18.0%	6.0%	16.0%	6.0%	3.1%	3.2%	10.0%	4.0%
Walk	27.0%	26.0%	83.0%	25.0%	12.5%	83.0%	10.5%	83.0%	46.1%	61.0%	15.0%	87.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

	(1)		(1)		(1)		(5)		(1)		(3)		(5)		(4)		(11)	
In/Out Splits:	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM	15.0%	85.0%	15.0%	85.0%	50.0%	50.0%	50.0%	50.0%	96.0%	4.0%	88.0%	12.0%	39.0%	61.0%	100.0%	0.0%	55.0%	45.0%
MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	48.0%	52.0%	50.0%	50.0%	54.0%	46.0%	65.0%	35.0%	50.0%	50.0%
PM	70.0%	30.0%	70.0%	30.0%	50.0%	50.0%	50.0%	50.0%	5.0%	95.0%	12.0%	88.0%	65.0%	35.0%	24.0%	76.0%	45.0%	55.0%

Vehicle Occupancy:	(7)	(7)	(7)	(5)	(3)	(3)	(5)	(9)	(11)
Auto	1.50	1.50	1.60	2.00	1.30	1.4	1.4	3.5	2.8
Taxi	1.40	1.40	1.20	2.70	1.40	1.2	1.8	2.0	2.8
Truck Trip Generation:	(8)	(8)	(8)	(8)	(8)	(8)	(5)	(4)	
	0.03 per du	0.03 per du	0.35 per 1,000 sf	0.35 per 1,000 sf	0.15 per 1,000 sf	0.52 per 1,000 sf	0.06 per 1,000 sf	0.2 per 1,000 sf	0 per 1,000 sf
	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(5)	
AM	12.2%	12.2%	7.7%	7.7%	9.6%	14.0%	12.2%	11.6%	
MD	8.7%	8.7%	11.0%	11.0%	11.0%	8.6%	8.7%	7.6%	
PM	1.0%	1.0%	1.0%	0.0%	1.0%	1.0%	0.0%	0.0%	

	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM/MD/PM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Sources:
(1) Pushkarev & Zupan, "Urban Space for Pedestrians," 1975.
(2) Based on ITE Trip Generation Handbook, code number 820, shopping center, expanded to person trips.
(3) Based on Hudson Square Rezoning FEIS, 2003.
(4) Based on American Museum of Natural History, Planetarium and North Side Project FEIS, 1996.
(5) Based on Coliseum Redevelopment FEIS, 1997.
(6) Based on 2000 Census journey-to-work data
(7) Based on Chelsea Rezoning EAS, 1999.
(8) Federal Highway Administration, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981.
(9) PHA Assumption
(10) Modified from 2000 Census reverse journey-to-work data
(11) Based on Hudson River Park FEIS, May 1998

Table 16-7
With-Action Transportation Demand Forecast
THIS TABLE HAS BEEN REVISED FOR THE FEIS

Land Use:		Residential <= 1/4 mi. of subway		Residential 1/4 - 1/2 mi. of subway		Local Retail		Specialized Retail		Office		Storage/Mfg.		Hotel		Community Facility Museum		High Line Open Space	
Size/Units:		201	DU	4,507	DU	146,411	GSF	48,804	GSF	-796,947	GSF	-74,818	GSF	-131	rooms	198,726	GSF	5.9	acres
Peak Hour Trips:																			
	AM	148		3,312		930		191		-1,693		-112		-92		42		103	
	MD	76		1,711		5,703		722		-2,080		-86		-177		672		251	
	PM	174		3,894		2,881		738		-1,965		-120		-158		561		206	
Person Trips:																			
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM	Auto	1	8	40	225	9	9	19	19	-293	-12	-22	-3	-3	-5	15	0	3	2
	Taxi	1	8	35	197	14	14	10	10	-24	-1	-1	0	-6	-10	6	0	1	0
	Subway	12	65	243	1,379	28	28	19	19	-813	-34	-49	-7	-9	-14	10	0	2	1
	Bus	2	11	50	282	28	28	24	24	-293	-12	-16	-2	-1	-2	4	0	2	1
	Walk	6	34	129	732	386	386	24	24	-203	-8	-10	-1	-17	-26	6	0	49	40
	Total	22	126	497	2,815	465	465	96	96	-1,626	-67	-98	-13	-36	-57	41	0	57	44
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
MD	Auto	2	2	68	68	57	57	72	72	-20	-22	-1	-1	-8	-7	153	82	6	6
	Taxi	2	2	60	60	86	86	36	36	-30	-32	-1	-1	-14	-12	65	35	1	1
	Subway	20	20	419	419	171	171	72	72	-60	-65	-3	-3	-12	-10	109	59	4	4
	Bus	3	3	86	86	171	171	90	90	-60	-65	-3	-3	-3	-3	44	24	5	5
	Walk	10	10	222	222	2,367	2,367	90	90	-829	-898	-36	-36	-58	-50	65	35	109	109
	Total	37	37	855	855	2,851	2,852	360	360	-999	-1082	-43	-43	-95	-82	436	235	125	125
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
PM	Auto	7	3	218	93	29	29	74	74	-18	-336	-3	-12	-9	-5	47	149	5	6
	Taxi	7	3	191	82	43	43	37	37	-1	-28	-0	-2	-18	-10	20	64	1	1
	Subway	63	27	1,336	572	86	86	74	74	-49	-934	-7	-53	-25	-13	34	107	3	3
	Bus	11	5	273	117	86	86	92	92	-18	-336	-2	-17	-3	-2	13	43	4	5
	Walk	33	14	709	304	1,196	1,196	92	92	-12	-233	-2	-11	-47	-25	20	64	81	99
	Total	121	52	2,727	1168	1,440	1,440	369	369	-98	-1867	-14	-95	-102	-55	134	427	94	114

Person Trips:		Total Generated Trips		Total Eliminated Trips		Total Net Increment	
Peak Hour Trips:							
	AM	4,623		-1,897		2,726	
	MD	8,883		-2,343		6,540	
	PM	8,248		-2,243		6,005	
Person Trips:							
		In	Out	In	Out	In	Out
AM	Auto	87	263	-318	-20	-231	243
	Taxi	67	229	-31	-11	36	218
	Subway	314	1,492	-871	-55	-557	1,437
	Bus	110	346	-310	-16	-200	330
	Walk	600	1,216	-230	-35	370	1,181
	Total	1,178	3,546	-1,760	-137	-582	3,409
		In	Out	In	Out	In	Out
MD	Auto	358	287	-29	-30	329	257
	Taxi	250	220	-45	-45	205	175
	Subway	795	745	-75	-78	720	667
	Bus	399	379	-66	-71	333	308
	Walk	2,863	2,833	-923	-984	1,940	1,849
	Total	4,664	4,464	-1,137	-1,207	3,527	3,256
		In	Out	In	Out	In	Out
PM	Auto	380	354	-30	-353	350	1
	Taxi	299	230	-19	-40	280	190
	Subway	1,596	869	-81	-1,000	1,515	-131
	Bus	479	348	-23	-355	456	-7
	Walk	2,131	1,769	-61	-269	2,070	1,500
	Total	4,885	3,570	-214	-2,017	4,671	1,553

Vehicle Trips:		Total Generated Trips		Total Eliminated Trips		Total Net Increment	
Vehicle Trips:							
		In	Out	In	Out	In	Out
AM	Auto	49	172	-243	-15	-194	157
	Taxi	188	188	-26	-26	162	162
	Truck	14	14	-10	-10	4	4
	Total	251	374	-279	-51	-28	323
		In	Out	In	Out	In	Out
MD	Auto	164	143	-22	-23	142	120
	Taxi	230	230	-48	-48	182	182
	Truck	13	13	-9	-9	4	4
	Total	407	386	-79	-80	328	306
		In	Out	In	Out	In	Out
PM	Auto	220	164	-22	-271	198	-107
	Taxi	253	253	-33	-33	220	220
	Truck	2	2	-1	-1	1	1
	Total	475	419	-56	-305	419	114

Auto and taxi trips were assigned to the study area based on their origins and destinations, and were then assigned to the most direct routes to and from each projected development site in the proposed action area. Autos and trucks were assigned to each site while taxis were assigned to one or more interfaces surrounding each site.

VEHICULAR TRAFFIC

Figure 16-9 shows the incremental traffic assignment generated by the proposed action during the AM, midday and PM peak hours. Figures 16-10, 16-11 and 16-12 show the With-Action condition traffic network for the three peak hours, which is a combination of the incremental project-related traffic and the traffic volumes in the future No-Action condition. Table 16-8 presents the resulting traffic capacity analysis under the With-Action condition and compares this to the No-Action condition.

Based on the thresholds established for signalized intersections in the *CEQR Technical Manual*, if a No-Action LOS A, B or C deteriorates to unacceptable mid-LOS D, or a LOS E or F in the With-Action condition, then a significant traffic impact has occurred. The *CEQR Technical Manual* further states that for a No-Action LOS A, B or C, which declines to mid-LOS D or worse under the With-Action condition, mitigation to mid-LOS D is required. For a No-Action mid-LOS D, an increase of five or more seconds of delay in a lane group in the With-Action condition should be considered significant. For No-Action LOS E, an increase in delay of four seconds of delay should be considered significant. For No-Action LOS F, three seconds of delay should be considered significant, however, if a No-Action LOS F condition already has delays in excess of 120 seconds, an increase of 1.0 second in delay should be considered significant, unless the proposed action would generate fewer than five vehicles through that lane group in the peak hour.

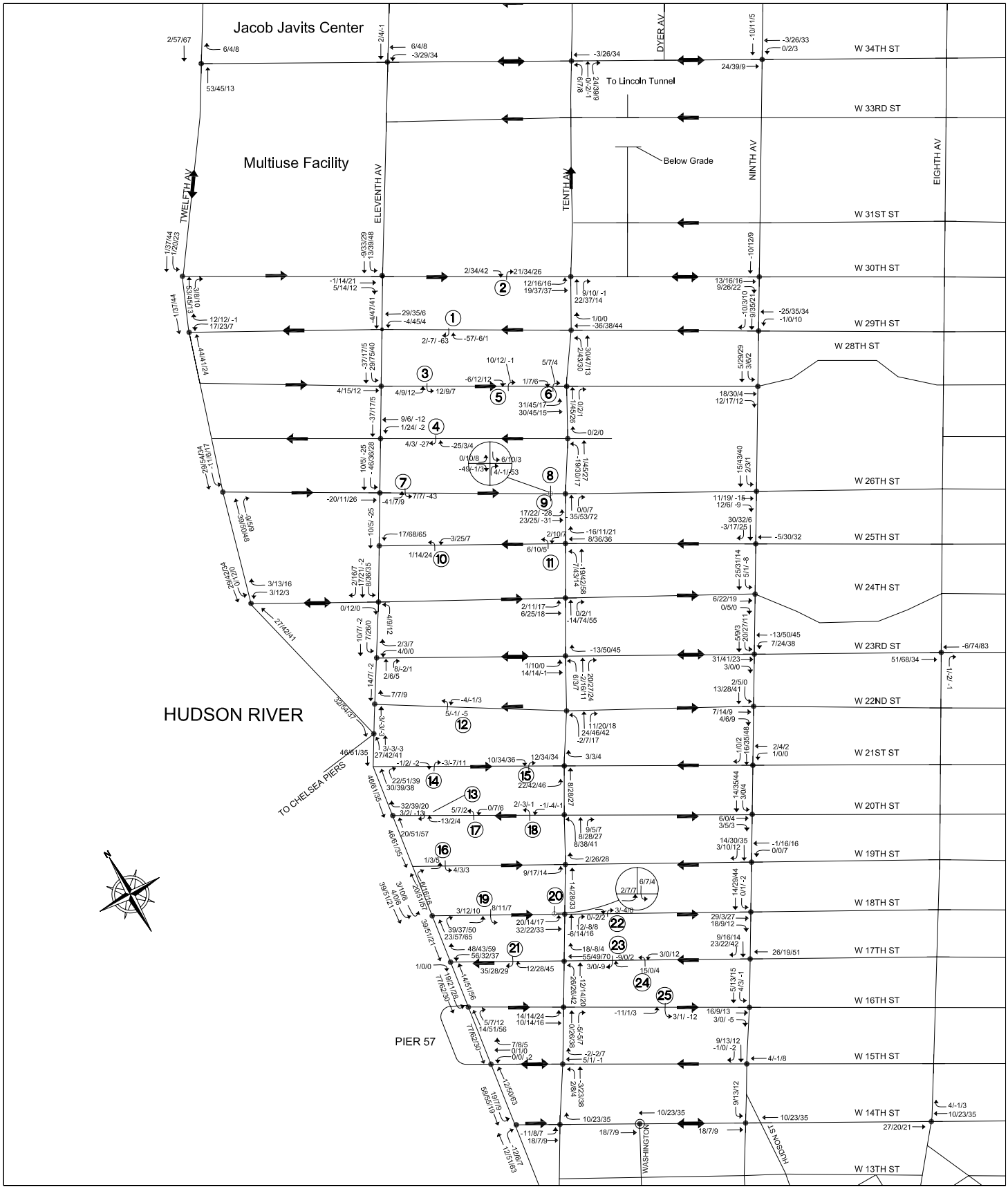
Table 16-8 shows the results of the traffic analysis for 2013 With-Action conditions and highlights (with a "*") the significantly impacted movements based on the above CEQR criteria. Table 16-9 provides a summary of these impacted locations. As shown in Table 16-9, there would be ~~10~~ 11 intersections with one or more significantly adversely impacted movements in the AM peak hour, 18 intersections in the midday and ~~15~~ 16 intersections in the PM. These are described in more detail below.

Route 9A Corridor

Along the Route 9A corridor in the AM, as shown in Table 16-8, significant adverse impacts would occur at W. 17th Street where the westbound left-turn delay would increase from a No-Action 190.4 seconds (LOS F) to ~~293.4~~ 291.1 seconds (LOS F) and the westbound right-turn delay would increase from 144.3 seconds (LOS F) to ~~182.6~~ 174.9 seconds (LOS F), and at W. 15th Street where the southbound delay would increase from 50.9 seconds to 61.9 seconds.

In the midday period, significant adverse impacts are expected at W. 30th Street, W. 24th Street, W. 20th Street, W. 18th Street, W. 17th Street, W. 16th Street, W. 15th Street and W. 14th Street. At W. 30th Street, the No-Action delay on the southbound left-turn would increase from ~~62.4~~ 80.7

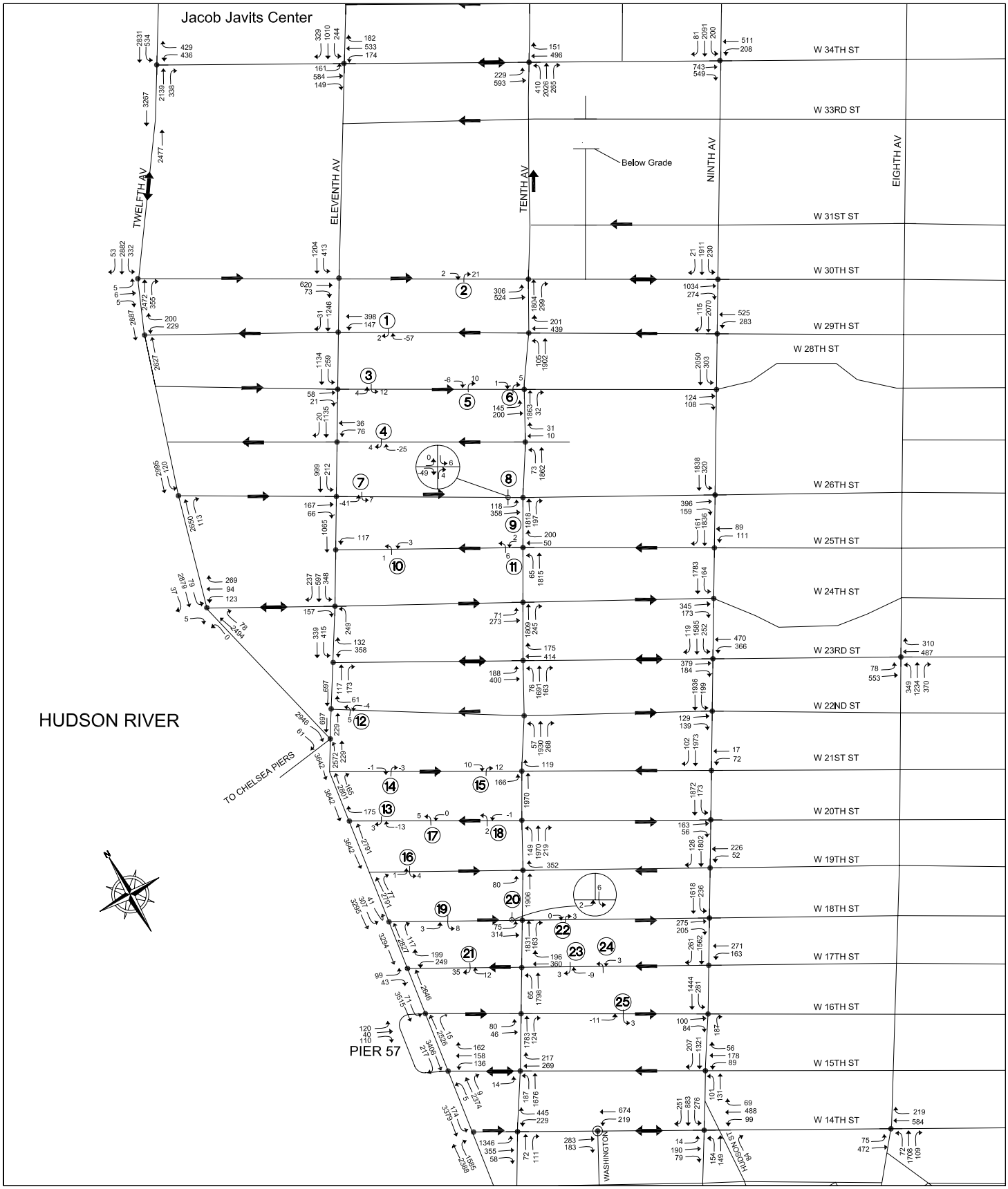
Figure 16-9
2013 With-Action Incremental Traffic Volumes
THIS FIGURE HAS BEEN REVISED FOR THE FEIS



LEGEND:

- ◉ Analyzed Unsignalized Intersections
- • Analyzed Signalized Intersections
- ㉔ Projected Development Site
- XX/YY/ZZ Peak Hour Volumes - AM/MD/PM

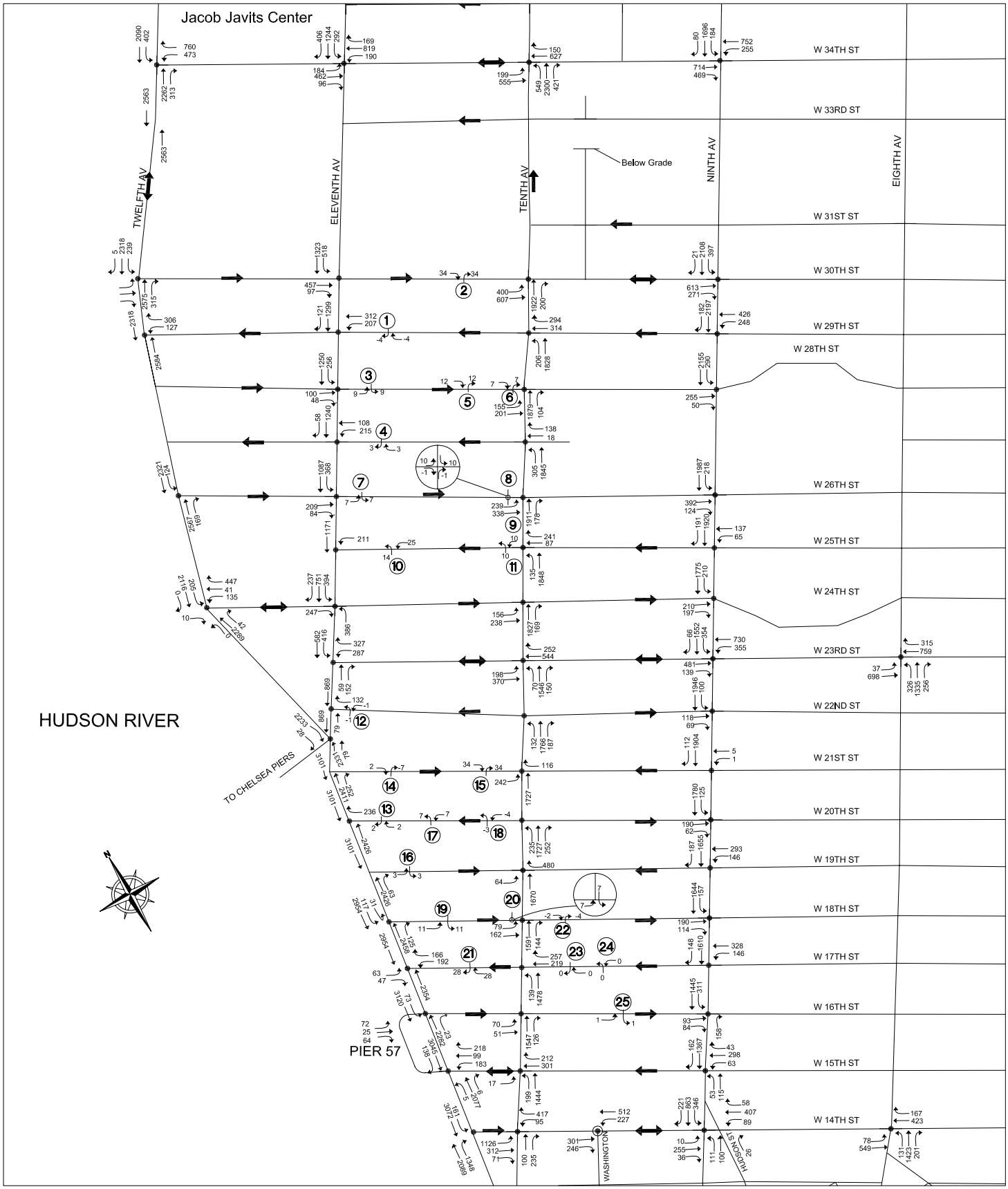
Figure 16-10
2013 With-Action Traffic Volumes AM Peak Hour
THIS FIGURE HAS BEEN REVISED FOR THE FEIS



LEGEND:

- ⊙ Analyzed Unsignalized Intersections
- • Analyzed Signalized Intersections
- ㉔ Projected Development Sites

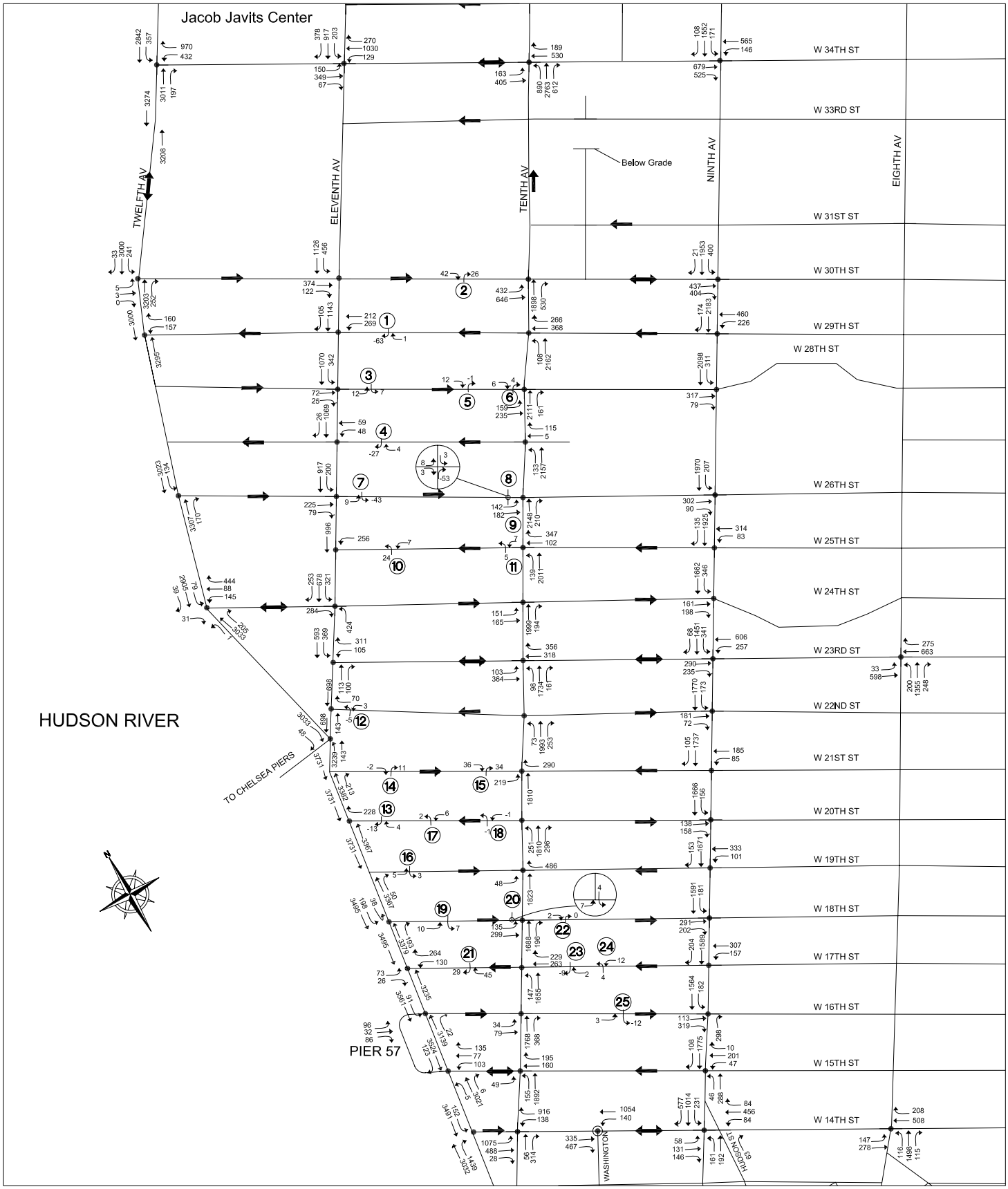
Figure 16-11
2013 With-Action Traffic Volumes MD Peak Hour
THIS FIGURE HAS BEEN REVISED FOR THE FEIS



LEGEND:

- ⊙ Analyzed Unsignalized Intersections
- • Analyzed Signalized Intersections
- ㉔ Projected Development Sites

Figure 16-12
2013 With-Action Traffic Volumes PM Peak Hour
THIS FIGURE HAS BEEN REVISED FOR THE FEIS



LEGEND:

- ⊙ Analyzed Unsignalized Intersections
- • Analyzed Signalized Intersections
- ㉔ Projected Development Sites

Table 16-8
2013 With-Action Traffic Conditions

THIS TABLE HAS BEEN REVISED FOR FEIS

		2013 NO-ACTION				2013 WITH-ACTION				2013 NO-ACTION				2013 WITH-ACTION				2013 NO-ACTION				2013 WITH-ACTION			
		AM Peak Hour				AM Peak Hour				MD Peak Hour				MD Peak Hour				PM Peak Hour				PM Peak Hour			
ANALYZED INTERSECTIONS	**LANE GROUP**	**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**	
W.34th Street (WB) @	WB - L	0.75	53.3	D		0.75	53.3	D		0.85	41.9	D		0.85	41.9	D		0.81	50.8	D		0.81	50.8	D	
12th Avenue (N-S)	WB - R	0.35	25.2	C		0.36	25.3	C		0.55	15.2	B		0.55	15.3	B		0.90	42.5	D		0.90	43.3	D	
(Route 9A)	NB - T	0.72	16.3	B		0.74	16.7	B		1.01	38.0	D		1.03	43.7	D		0.98	24.9	C		0.99	25.7	C	
	NB - R	0.53	32.4	C		0.53	32.4	C		0.69	32.3	C		0.69	32.3	C		0.29	20.3	C		0.29	20.3	C	
	SB - L	0.64	39.7	D		0.63	39.5	D		0.36	26.5	C		0.36	26.5	C		0.33	43.2	D		0.33	43.2	D	
	SB - T	0.95	23.4	C		0.95	23.5	C		0.77	4.0	A		0.79	4.3	A		0.93	18.1	B		0.95	20.4	C	
W. 30th Street (EB) @	EB - LTR	0.06	54.7	D		0.06	54.7	D		0.00	38.4	D		0.00	38.4	D		0.03	43.8	D		0.03	43.8	D	
12th Avenue (N-S)	NB - TR	0.72	10.3	B		0.74	10.5	B		0.84	23.0	C		0.86	23.7	C		0.85	4.7	A		0.86	4.8	A	
(Route 9A)	SB - L	1.21	178.2	F		1.21	179.7	F	**(1)**	0.90	80.7	F	*	0.99	98.9	F	*	0.93	82.2	F		1.03	107.1	F	*
	SB - TR	0.79	3.8	A		0.79	3.8	A		0.69	2.8	A		0.71	2.9	A		0.81	4.0	A		0.82	4.2	A	
	WB - L	0.54	61.10	E		0.61	64.3	E										0.32	39.0	D		0.33	39.3	D	
W. 29th Street (WB) @	WB - LR	0.41	56.2	E		0.44	57.0	E		WB - LR	0.64	51.0	D	WB - LR	0.71	55.3	E	0.26	37.7	D		0.26	37.7	D	
12th Avenue (N-S)	WB - R	0.48	58.7	E		0.51	59.8	E		WB - R	0.72	55.0	D	WB - R	0.76	57.7	E	0.32	39.1	D		0.32	39.1	D	
(Route 9A)	NB - T	0.59	2.6	A		0.60	2.7	A			0.69	2.8	A		0.70	2.9	A	0.87	5.2	A		0.87	5.4	A	
	SB - T	0.85	5.5	A		0.85	5.5	A			0.80	4.3	A		0.81	4.5	A	1.01	25.9	C		1.02	30.0	C	
W. 26th Street (E-W) @	NB - TR	0.68	3.7	A		0.68	3.7	A			0.72	3.0	A		0.73	3.1	A	0.83	4.1	A		0.84	4.4	A	
12th Avenue (N-S)	SB - L	0.38	52.8	D		0.35	52.0	D			0.33	40.5	D		0.35	40.8	D	0.31	40.0	D		0.35	40.9	D	
(Route 9A)	SB - T	0.94	10.0	A		0.95	10.9	B			0.77	3.9	A		0.79	4.1	A	0.92	11.2	B		0.93	12.0	B	
W. 24th Street (E-W) @	EB - R	0.02	52.4	D		0.02	52.4	D			0.04	37.3	D		0.04	37.3	D	0.09	36.5	D		0.09	36.5	D	
12th Avenue (N-S)	WB - L	0.31	58.1	E		0.32	58.3	E			0.24	39.7	D		0.26	40.1	D	0.40	42.0	D		0.41	42.3	D	
(Route 9A)	WB - LTR	0.51	63.4	E		0.52	63.6	E			0.28	40.5	D		0.30	40.8	D	0.23	38.5	D		0.23	38.5	D	
	WB - R	1.14	164.0	F		1.03	125.6	F			1.07	111.6	F		1.10	122.3	F	*	1.12	126.2	F		1.16	140.7	F	*
	NB - TR	0.81	10.4	B		0.82	10.6	B			0.97	15.6	B		0.99	18.6	B		1.11	73.9	E		1.12	77.5	E	
	SB - L	0.36	46.8	D		0.36	47.2	D			1.09	137.0	F		1.10	141.0	F	*	0.40	54.9	D		0.40	54.9	D	
	SB - TR	0.77	3.7	A		0.78	3.8	A			0.74	3.8	A		0.76	4.0	A		1.01	34.7	C		1.03	40.0	D	
12th Avenue (SB) @	WB - T	0.94	78.5	E		0.96	82.2	F			1.05	85.9	F		1.05	88.7	F	0.80	48.0	D		0.80	47.8	D	
11th Avenue (WB)	NB - T	0.79	7.6	A		0.80	7.8	A			0.85	13.0	B		0.86	13.5	B	1.04	32.4	C		1.05	37.8	D	
(Route 9A)	NB - R	0.71	59.4	E		0.72	60.1	E			0.22	28.6	C		0.21	28.5	C	0.34	30.8	C		0.33	30.7	C	
	SB - TR	0.91	8.0	A		0.92	8.5	A			0.79	11.4	B		0.81	11.9	B	1.02	33.1	C		1.03	36.9	D	
W. 34th Street (E-W) @	EB-LTR	0.62	21.7	C		0.62	21.8	C			0.56	23.7	C		0.54	23.9	C	0.71	117.0	F		0.74	131.0	F	*
11th Avenue (SB)	WB - Defl	0.70	32.4	C		0.69	31.5	C							0.63	25.3	C								
	WB - TR	0.63	20.1	C		0.64	20.2	C		WB- LTR	0.69	17.8	B		0.91	30.9	C	WB- LTR	0.92	31.1	C	WB- LTR	0.98	40.4	D	
	SB - LTR	0.76	22.6	C		0.76	22.6	C			1.02	48.8	D		1.02	49.2	D		0.73	23.5	C		0.73	23.5	C	
W.30th Street (EB) @	EB - TR	0.69	23.7	C		0.69	23.8	C			0.57	20.9	C		0.60	21.6	C	0.53	22.1	C		0.52	20.1	C	
11th Avenue (SB)	SB - LT	0.71	18.9	B		0.71	18.9	B			0.52	15.8	B		0.54	16.0	B	0.47	13.1	B		0.53	16.0	B	
W.29th Street (WB) @	WB - LT	0.48	19.1	B		0.50	19.5	B			0.44	18.5	B		0.52	19.8	B	0.46	18.9	B		0.47	19.0	B	
11th Avenue (SB)	SB - TR	0.62	17.5	B		0.62	17.4	B			0.68	18.4	B		0.70	18.9	B	0.57	16.7	B		0.58	16.9	B	

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Impacted Intersections

(1) - No impacted, the proposed action would generate less than 5 vph through that lane group in the AM peak hour

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-8
2013 With-Action Traffic Conditions

THIS TABLE HAS BEEN REVISED FOR FEIS

		2013 NO-ACTION				2013 WITH-ACTION				2013 NO-ACTION				2013 WITH-ACTION			
		AM Peak Hour				AM Peak Hour				MD Peak Hour				MD Peak Hour			
ANALYZED INTERSECTIONS	LANE GROUP	V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS	
W.28th Street (EB) @	EB - TR	0.15	18.5	B		0.16	18.6	B		0.29	20.3	C		0.32	20.8	C	
11th Avenue (SB)	SB - LT	0.60	13.4	B		0.60	13.3	B		0.62	13.6	B		0.66	14.2	B	
W.27th Street (WB) @	WB-LT	0.11	20.4	C		0.13	20.5	C		0.36	23.1	C		0.39	23.7	C	
11th Avenue (SB)	SB-TR	0.45	9.1	A		0.44	9.0	A		0.51	9.6	A		0.52	9.7	A	
W.26th Street (EB) @	EB - TR	0.46	31.6	C		0.42	30.9	C		0.50	32.2	C		0.52	32.5	C	
11th Avenue (SB)	SB - LT	0.40	3.9	A		0.39	3.8	A		0.47	4.2	A		0.48	4.3	A	
W.25th Street (WB) @	WB - L	0.21	25.2	C		0.25	25.7	C		0.36	27.6	C		0.52	31.2	C	
11th Avenue (SB)	SB - T	0.36	5.6	A		0.37	5.7	A		0.32	5.4	A		0.33	5.4	A	
W.24th Street (EB) @	EB-R	0.25	26.8	C		0.25	26.8	C		0.39	28.8	C		0.41	29.1	C	
11th Avenue (N-S)	NB-L	0.35	28.0	C		0.36	28.1	C		0.57	31.8	C		0.59	32.1	C	
	SB-TR	0.75	33.3	C		0.76	33.9	C		0.90	41.9	D		0.94	46.2	D	
W.23rd Street (E-W) @	WB - L	0.68	27.8	C		0.69	28.1	C		0.53	23.2	C		0.53	23.2	C	
11th Avenue (N-S)	WB - R	0.30	18.9	B		0.31	19.0	B		0.46	21.2	C		0.46	21.3	C	
	NB - TR	0.24	14.9	B		0.25	15.0	B		0.18	11.0	B		0.18	11.1	B	
	SB - L	0.93	51.2	D		0.97	58.7	E	*	0.83	34.2	C		0.89	41.4	D	
	SB -T	0.25	14.9	B		0.26	15.0	B		0.45	13.6	B		0.46	13.7	B	
W.22nd Street (WB) @	WB - R	0.04	10.8	B		0.05	10.8	B		0.10	13.0	B		0.10	13.0	B	
11th Avenue (N-S)	NB - T	0.39	51.0	D		0.40	51.1	D		0.12	32.9	C		0.11	32.8	C	
W.20th Street (WB) @	WB - R	0.40	51.7	D		0.49	54.1	D		0.31	34.3	C		0.38	35.3	D	
11th Avenue (N-S)	NB - T	0.67	4.5	A		0.67	4.6	A		0.66	2.8	A		0.68	2.9	A	
(Route 9A)	SB - T	0.94	8.8	A		0.95	9.9	A		1.18	96.4	F		1.21	109.1	F	*
W. 18th Street (EB) @	NB - TR	0.85	7.7	A		0.87	8.3	A		0.96	13.0	B		1.00	19.9	B	
11th Avenue (N-S)	SB - L	0.88	78.6	E		0.90	81.1	F		0.30	34.5	C		0.32	34.9	C	
(Route 9A)	SB - T	0.96	11.4	B		0.97	13.6	B		1.13	74.2	E		1.15	83.4	F	*
W. 17th Street (E-W) @	EB - L	0.70	92.9	F		0.71	94.1	F		0.14	44.9	D		0.14	44.9	D	
11th Avenue (N-S)	EB - R	0.33	73.5	E		0.35	74.0	E		0.12	44.7	D		0.12	44.7	D	
(Route 9A)	WB - L	1.18	190.4	F		1.44	291.1	F	*	1.50	316.0	F		1.79	440.9	F	*
	WB - R	1.03	144.3	F		1.14	174.9	F	*	1.15	182.9	F		1.55	337.0	F	*
	NB -T	0.78	4.2	A		0.78	4.3	A		0.88	6.8	A		0.90	7.7	A	
	SB - T	0.98	17.5	B		0.99	19.8	B		1.18	99.6	F		1.20	109.4	F	*
W.16th Street (EB)	NB - TR	0.75	5.6	A		0.75	5.7	A		0.86	6.1	A		0.88	6.9	A	
11th Avenue (N-S)	SB - L	0.20	11.9	B		0.27	20.8	C		0.18	9.1	A		0.25	17.4	B	
(Route 9A)	SB - T	1.01	23.4	C		1.04	32.0	C		1.25	134.7	F		1.28	147.3	F	*

		2013 NO-ACTION				2013 WITH-ACTION			
		PM Peak Hour				PM Peak Hour			
ANALYZED INTERSECTIONS	LANE GROUP	V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS	
W.28th Street (EB) @	EB - TR	0.17	18.8	B		0.20	19.1	B	
11th Avenue (SB)	SB - LT	0.56	12.9	B		0.58	13.1	B	
W.27th Street (WB) @	WB-LT	0.13	20.6	C		0.12	20.4	C	
11th Avenue (SB)	SB-TR	0.41	8.8	A		0.41	8.8	A	
W.26th Street (EB) @	EB - TR	0.83	50.0	D		0.90	60.1	E	*
11th Avenue (SB)	SB - LT	0.35	5.1	A		0.36	5.1	A	
W.25th Street (WB) @	WB - L	0.42	28.7	C		0.57	32.0	C	
11th Avenue (SB)	SB - T	0.32	5.4	A		0.31	5.3	A	
W.24th Street (EB) @	EB-R	0.45	29.7	C		0.45	29.7	C	
11th Avenue (N-S)	NB-L	0.61	32.7	C		0.62	33.1	C	
	SB-TR	0.87	39.2	D		0.87	39.6	D	
W.23rd Street (E-W) @	WB - L	0.18	17.5	B		0.18	17.5	B	
11th Avenue (N-S)	WB - R	0.71	31.0	C		0.72	31.9	C	
	NB - TR	0.16	10.9	B		0.17	10.9	B	
	SB - L	0.68	24.8	C		0.69	25.2	C	
	SB -T	0.45	13.6	B		0.45	13.6	B	
W.22nd Street (WB) @	WB - R	0.05	12.5	B		0.05	12.6	B	
11th Avenue (N-S)	NB - T	0.20	33.9	C		0.19	33.9	C	
W.20th Street (WB) @	WB - R	0.31	34.3	C		0.34	34.8	C	
11th Avenue (N-S)	NB - T	0.88	5.6	A		0.89	6.0	A	
(Route 9A)	SB - T	1.17	92.6	F		1.18	99.2	F	*
W. 18th Street (EB) @	NB - TR	1.09	53.3	D		1.13	70.6	E	*
11th Avenue (N-S)	SB - L	0.47	38.2	D		0.50	38.9	D	
(Route 9A)	SB - T	1.11	63.2	E		1.12	66.3	E	
W. 17th Street (E-W) @	EB - L	0.27	53.9	D		0.27	53.9	D	
11th Avenue (N-S)	EB - R	0.15	52.9	D		0.15	52.9	D	
(Route 9A)	WB - L	0.42	50.2	D		0.59	56.5	E	*
	WB - R	0.80	69.2	E		1.03	111.5	F	*
	NB -T	1.01	21.8	C		1.03	28.0	C	
	SB - T	1.11	66.9	E		1.12	69.6	E	
W.16th Street (EB)	NB - TR	0.98	24.2	C		1.01	29.2	C	
11th Avenue (N-S)	SB - L	0.18	35.4	D		0.26	45.0	D	
(Route 9A)	SB - T	1.13	74.5	E		1.14	78.6	E	*

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Impacted Intersections

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-8
2013 With-Action Traffic Conditions

THIS TABLE HAS BEEN REVISED FOR FEIS

		2013 NO-ACTION				2013 WITH-ACTION				2013 NO-ACTION				2013 WITH-ACTION				2013 NO-ACTION				2013 WITH-ACTION			
		AM Peak Hour				AM Peak Hour				MD Peak Hour				MD Peak Hour				PM Peak Hour				PM Peak Hour			
ANALYZED INTERSECTIONS	LANE GROUP	V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS		V/C Ratio	Delay (Sec)	LOS	
W. 15th Street (E-W) @	WB - LTR	0.66	56.8	E		0.67	57.3	E		0.58	38.9	D		0.59	39.2	D		0.37	35.0	C		0.38	35.0	C	
11th Avenue (N-S)	NB - LTR	0.75	5.8	A		0.76	5.9	A		0.90	16.0	B		0.92	17.7	B		0.99	17.3	B		1.01	23.1	C	
(Route 9A)	SB - TR	1.08	50.9	D		1.10	61.9	E	*	1.28	148.3	F		1.31	159.8	F	*	1.16	88.6	F		1.17	93.3	F	*
W.14th Street (EB)	NB - T	0.66	4.1	A		0.66	4.1	A		0.76	10.7	B		0.78	11.1	B		0.92	16.0	B		0.94	17.6	B	
11th Avenue (N-S)	NB - R	0.89	11.3	B		0.88	10.9	B		0.90	28.5	C		0.91	29.0	C		0.88	26.4	C		0.92	30.2	C	
(Route 9A)	SB - L	0.31	22.9	C		0.34	27.5	C		0.27	18.6	B		0.28	19.5	B		0.24	23.0	C		0.26	24.4	C	
	SB - T	1.01	21.4	C		1.03	27.6	C		1.14	81.9	F		1.16	91.3	F	*	1.11	66.6	E		1.12	69.1	E	
W.34th Street (E-W) @	EB - Defl	0.85	50.9	D		0.85	50.9	D		0.92	67.4	E		0.92	66.6	E		0.81	52.1	D		0.81	51.5	D	
10th Avenue (NB)	EB - T	0.62	26.2	C		0.62	26.2	C		0.63	25.9	C		0.63	25.9	C		0.41	21.1	C		0.41	21.1	C	
	WB - TR	0.54	24.3	C		0.54	24.2	C		0.63	25.0	C		0.65	25.5	C		0.55	23.1	C		0.58	23.5	C	
	NB - LTR	0.81	15.2	B		0.82	15.5	B	NB-LT	1.18	103.2	F	NB-LT	1.19	104.4	F		1.10	68.7	E		1.11	70.7	E	
									NB-R	0.65	21.0	C	NB-R	0.72	23.5	C									
W.30th Street (EB) @	EB - LT	0.64	27.9	C		0.67	28.5	C		0.81	32.3	C		0.85	34.5	C		0.75	28.1	C		0.79	29.4	C	
10th Avenue (NB)	NB - TR	0.61	9.8	A		0.62	9.9	A		0.79	13.6	B		0.81	14.0	B		0.74	14.4	B		0.74	14.5	B	
W.29th Street (WB) @	WB - TR	0.56	26.4	C		0.53	25.9	C		0.79	35.1	D		0.84	38.2	D		0.50	25.5	C		0.54	26.0	C	
10th Avenue (NB)	NB - LT	0.60	9.7	A		0.60	9.8	A		0.79	13.0	B		0.83	14.0	B		0.67	10.6	B		0.68	10.7	B	
W.28th Street (EB) @	EB - LT	0.35	23.8	C		0.43	25.0	C		0.36	24.0	C		0.49	25.9	C		0.45	25.3	C		0.49	25.9	C	
10th Avenue (NB)	NB -TR	0.54	9.1	A		0.54	9.1	A		0.75	12.1	B		0.77	12.5	B		0.65	10.2	B		0.66	10.3	B	
W.27th Street (WB) @	WB-TR	0.06	20.5	C		0.06	20.5	C		0.15	21.3	C		0.15	21.3	C		0.17	21.8	C		0.17	21.8	C	
10th Avenue (NB)	NB-LT	0.56	9.3	A		0.55	9.2	A		0.81	13.3	B		0.84	14.2	B		0.59	9.5	A		0.60	9.6	A	
W.26th Street (EB) @	EB-LT	0.97	63.7	E		1.06	88.4	F	*	1.20	138.1	F		1.31	182.7	F	*	0.86	45.1	D		0.73	34.7	C	
10th Avenue (NB)	NB-TR	0.60	11.0	B		0.59	10.9	B		0.83	15.6	B		0.85	16.3	B		0.67	11.8	B		0.69	12.1	B	
W.25th Street (WB) @	WB-TR	0.71	37.8	D		0.68	36.5	D		0.85	49.9	D		0.97	69.6	E	*	1.07	97.7	F		1.21	148.5	F	*
10th Avenue (NB)	NB-LT	0.52	7.7	A		0.52	7.7	A		0.71	9.9	A		0.74	10.4	B		0.56	8.0	A		0.57	8.1	A	
W.24th Street (EB) @	EB-LT	0.36	23.7	C		0.36	23.8	C		0.42	24.6	C		0.46	25.2	C		0.31	23.1	C		0.34	23.6	C	
10th Avenue (NB)	NB-TR	0.58	9.5	A		0.58	9.5	A		0.75	12.2	B		0.78	12.8	B		0.60	9.7	A		0.62	9.8	A	
W.23rd Street (E-W) @	EB - Defl	0.68	34.8	C		0.68	35.0	C		1.06	109.7	F		1.12	127.4	F	*								
10th Avenue (NB)	EB - T	0.38	20.7	C		0.39	20.9	C		0.39	22.2	C		0.41	22.4	C		EB-LT	0.44	23.4	C	0.44	23.4	C	
	WB - T	0.42	21.4	C		0.42	21.4	C		0.63	26.6	C		0.63	26.6	C			0.34	22.2	C	0.34	22.2	C	
	WB -R	0.50	25.3	C		0.46	24.4	C		0.54	27.4	C		0.67	32.4	C			0.82	43.8	D	0.94	61.3	E	*
	NB - LTR	0.68	14.3	B		0.68	14.4	B		0.75	14.5	B		0.78	15.1	B			0.59	10.9	B	0.60	11.1	B	

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Impacted Intersections

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-8
2013 With-Action Traffic Conditions

THIS TABLE HAS BEEN REVISED FOR FEIS

ANALYZED INTERSECTIONS	LANE GROUP	2013 NO-ACTION AM Peak Hour V/C Ratio	Delay (Sec)	LOS	2013 WITH-ACTION AM Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION MD Peak Hour V/C Ratio	Delay (Sec)	LOS	2013 WITH-ACTION MD Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION PM Peak Hour V/C Ratio	Delay (Sec)	LOS	2013 WITH-ACTION PM Peak Hour V/C Ratio	Delay (Sec)	LOS	
W.22nd Street (EB) @ 10th Avenue (NB)	NB - LTR	0.73	12.2	B	0.74	12.4	B		0.85	15.8	B	0.89	17.3	B		0.71	11.8	B	0.73	12.2	B	
W.21st Street (E-W) @	EB - L	0.16	21.5	C	0.18	21.7	C		0.23	22.3	C	0.28	22.8	C		0.20	21.9	C	0.25	22.4	C	
10th Avenue (NB)	WB - R	0.28	23.7	C	0.29	23.8	C		0.18	21.8	C	0.18	21.9	C		0.71	35.8	D	0.72	36.3	D	
	NB - T	0.61	9.8	A	0.61	9.8	A		0.69	11.1	B	0.70	11.3	B		0.49	8.7	A	0.50	8.7	A	
W.20th Street (EB) @ 10th Avenue (NB)	NB - LTR	0.72	11.2	B	0.73	11.4	B		0.88	16.4	B	0.91	18.2	B		0.65	10.2	B	0.67	10.5	B	
W.19th Street (E-W) @	EB - L	0.16	21.8	C	0.18	22.1	C		0.11	21.2	C	0.14	21.6	C		0.07	20.7	C	0.10	21.1	C	
10th Avenue (NB)	WB - R	0.57	28.0	C	0.57	28.1	C		0.74	33.9	C	0.79	36.1	D		0.70	32.1	C	0.75	33.9	C	
	NB - T	0.60	9.7	A	0.60	9.8	A		0.64	10.4	B	0.66	10.6	B		0.48	8.6	A	0.49	8.6	A	
W.18th Street (EB) @	EB - LT	0.34	23.4	C	0.39	24.1	C		0.22	22.1	C	0.26	22.6	C		0.37	23.8	C	0.42	24.4	C	
10th Avenue (NB)	NB - TR	0.60	9.7	A	0.60	9.7	A		0.69	11.0	B	0.69	11.1	B		0.51	8.8	A	0.52	8.9	A	
W.17th Street (WB) @	WB - TR	0.62	28.8	C	0.72	31.6	C		0.61	28.6	C	0.66	29.8	C		0.55	27.1	C	0.63	29.0	C	
10th Avenue (NB)	NB - LT	0.56	9.3	A	0.56	9.3	A		0.62	10.1	B	0.64	10.3	B		0.47	8.5	A	0.49	8.6	A	
W.16th Street (EB) @	EB - LT	0.23	22.7	C	0.28	23.5	C		0.11	21.0	C	0.14	21.3	C		0.11	21.0	C	0.16	21.5	C	
10th Avenue (NB)	NB - TR	0.59	9.7	A	0.59	9.6	A		0.65	10.5	B	0.66	10.6	B		0.59	9.5	A	0.60	9.7	A	
W.15th Street (E-W) @	EB - L	0.06	17.7	B	0.06	17.7	B		0.07	17.8	B	0.07	17.8	B		0.06	17.5	B	0.06	17.5	B	
10th Avenue (NB)	WB - TR	0.57	24.3	C	0.57	24.3	C		0.63	25.5	C	0.63	25.5	C		0.42	21.5	C	0.42	21.6	C	
	NB - LT	0.61	13.3	B	0.61	13.3	B		0.71	15.1	B	0.72	15.3	B		0.66	13.9	B	0.67	14.1	B	
W.14th Street (E-W) @	EB - L	1.06	68.8	E	1.05	66.1	E		0.89	34.9	C	0.90	35.5	D		0.81	29.7	C	0.81	29.9	C	
10th Avenue (NB)	EB - T	0.30	19.7	B	0.31	19.8	B		0.28	19.4	B	0.28	19.5	B		0.41	21.0	C	0.42	21.1	C	
	EB - R	0.10	17.9	B	0.10	17.9	B		0.14	18.3	B	0.14	18.3	B		0.05	17.3	B	0.05	17.3	B	
	WB - L	0.86	49.1	D	0.84	46.9	D		0.42	23.8	C	0.39	22.9	C		1.08	98.3	F	1.12	110.4	F	*
	WB - R	0.68	29.0	C	0.70	29.6	C		0.78	35.1	D	0.82	38.5	D		1.03	72.2	E	1.07	85.3	F	*
	NB - TR	0.10	11.9	B	0.10	11.9	B		0.22	10.0	B	0.22	10.0	A		0.23	10.1	B	0.23	10.1	B	
W.34th Street (EB) @	EB-TR	1.19	123.6	F	1.21	131.1	F	*	1.10	85.1	F	1.12	95.9	F	*	1.24	146.2	F	1.25	148.8	F	*
9th Avenue (SB)	WB - DefL	0.72	45.6	D	0.72	45.5	D		0.92	67.2	E	0.92	67.8	E		0.49	34.6	C	0.50	35.0	C	
	WB - T	0.41	15.1	B	0.41	15.1	B		0.55	15.4	B	0.57	15.7	B		0.42	15.3	B	0.45	15.6	B	
	SB - LTR	1.03	50.0	D	1.02	48.7	D		0.95	37.4	D	0.96	38.1	D		0.78	24.3	C	0.78	24.3	C	
W.30th Street (EB) @	EB-TR	1.18	119.2	F	1.20	128.1	F	*	0.79	33.3	C	0.84	35.5	D		0.80	34.5	C	0.84	36.7	D	
9th Avenue (SB)	SB-LTR	0.71	15.5	B	0.71	15.5	B		1.10	69.3	E	1.10	71.2	E		0.78	16.9	B	0.78	16.9	B	
W.29th Street (WB) @	WB-LT	1.02	64.7	E	0.99	57.2	E		0.83	36.6	D	0.87	39.8	D		0.78	33.9	C	0.83	37.0	D	
9th Avenue (SB)	SB-TR	0.67	10.5	B	0.67	10.5	B		0.97	24.9	C	0.99	27.9	C		0.71	11.2	B	0.72	11.3	B	

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Impacted Intersections

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-8
2013 With-Action Traffic Conditions

THIS TABLE HAS BEEN REVISED FOR FEIS

		2013 NO-ACTION				2013 WITH-ACTION				2013 NO-ACTION				2013 WITH-ACTION				2013 NO-ACTION				2013 WITH-ACTION			
		AM Peak Hour				AM Peak Hour				MD Peak Hour				MD Peak Hour				PM Peak Hour				PM Peak Hour			
ANALYZED INTERSECTIONS	**LANE GROUP**	**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**		**V/C Ratio**	**Delay (Sec)**	**LOS**	
W.28th Street (EB) @	EB-TR	0.28	23.0	C		0.33	23.6	C		0.36	24.0	C		0.43	25.0	C		0.51	26.4	C		0.53	26.8	C	
9th Avenue (SB)	SB-LT	0.69	10.8	B		0.69	10.8	B		0.96	22.8	C		0.97	25.0	C		0.70	10.9	B		0.71	11.1	B	
W.26th Street (EB) @	EB-TR	1.24	155.2	F		1.29	178.4	F	*	1.17	129.2	F		1.24	154.1	F	*	1.02	79.6	E		0.96	64.5	E	
9th Avenue (SB)	SB-LT	0.62	9.9	A		0.63	10.0	A		0.84	14.5	B		0.86	15.1	B		0.62	9.9	A		0.63	10.1	B	
W.25th Street (WB) @	WB-LT	0.29	25.8	C		0.28	25.7	C		0.25	25.3	C		0.29	25.8	C		0.49	28.6	C		0.53	29.4	C	
9th Avenue (SB)	SB-T	0.47	6.2	A		0.48	6.2	A	SB-TR	0.75	9.3	A	SB-TR	0.77	9.6	A	SB-TR	0.55	6.7	A	SB-TR	0.56	6.8	A	
	SB-R	0.22	5.4	A		0.21	5.4	A																	
W.24th Street (EB) @	EB-TR	1.10	100.4	F		1.11	104.7	F	*	0.90	51.4	D		0.95	61.1	E	*	0.77	39.4	D		0.81	42.0	D	
9th Avenue (SB)	SB-LT	0.56	8.7	A		0.57	8.8	A		0.77	11.9	B		0.79	12.2	B		0.59	8.9	A		0.59	9.0	A	
W.23rd Street (E-W) @	EB-TR	0.72	33.8	C		0.76	35.6	D		0.71	33.7	C		0.77	36.1	D		0.68	32.7	C		0.71	33.6	C	
9th Avenue (SB)	WB-DefL	1.12	115.9	F		1.18	140.0	F	*	1.01	80.0	E		1.13	119.2	F	*	0.74	38.2	D		0.89	57.6	E	*
	WB-T	0.41	16.8	B		0.40	16.7	B		0.57	18.7	B		0.61	19.5	B		0.48	19.0	B		0.52	19.6	B	
	SB-LTR	0.93	30.3	C		0.94	31.7	C		1.00	43.7	D		1.02	48.9	D	*	SB-LT	0.77	20.1	C	SB-LT	0.77	20.3	C	
																		SB-R	0.12	15.1	B	SB-R	0.12	15.1	B	
W.22nd Street (EB) @	EB-TR	0.61	30.4	C		0.63	31.4	C		0.40	25.1	C		0.45	26.0	C		0.52	27.7	C		0.57	28.9	C	
9th Avenue (SB)	SB-LT	0.80	14.0	B		0.81	14.2	B		0.78	13.4	B		0.79	13.7	B		0.68	11.5	B		0.69	11.7	B	
W.21st Street (WB) @	WB-LT	0.08	17.5	B		0.08	17.5	B		0.00	16.8	B		0.01	16.9	B		0.28	19.5	B		0.28	19.5	B	
9th Avenue (SB)	SB-TR	0.85	18.7	B		0.85	19.0	B		0.84	18.3	B		0.86	18.9	B		0.70	14.7	B		0.72	15.1	B	
W.20th Street (EB) @	EB-TR	0.24	19.1	B		0.25	19.2	B		0.28	19.6	B		0.29	19.7	B		0.33	20.2	C		0.33	20.3	C	
9th Avenue (SB)	SB-LT	0.81	17.2	B		0.81	17.4	B		0.76	16.1	B		0.78	16.4	B		0.68	14.5	B		0.70	14.8	B	
W.19th Street (WB) @	WB-LT	0.26	19.3	B		0.26	19.3	B		0.43	21.4	C		0.44	21.6	C		0.39	20.8	C		0.41	21.1	C	
9th Avenue (SB)	SB-TR	0.76	16.1	B		0.77	16.2	B		0.74	15.6	B		0.76	16.0	B		0.69	14.6	B		0.70	14.9	B	
W.18th Street (EB) @	EB-TR	0.49	22.7	C		0.55	23.6	C		0.36	20.7	C		0.38	20.9	C		0.50	22.8	C		0.54	23.5	C	
9th Avenue (SB)	SB-LT	0.73	15.4	B		0.74	15.5	B		0.72	15.2	B		0.73	15.4	B		0.66	14.2	B		0.68	14.4	B	
W.17th Street (WB) @	WB-LT	0.84	40.4	D		0.89	46.3	D	*	0.97	58.6	E		1.00	67.8	E	*	0.40	21.0	C		0.45	21.6	C	
9th Avenue (SB)	SB-TR	0.72	15.3	B		0.74	15.6	B		0.71	15.0	B		0.73	15.3	B		0.67	14.3	B		0.70	14.7	B	
W.16th Street (EB) @	EB-TR	0.33	31.0	C		0.36	31.5	C		0.35	31.4	C		0.37	31.7	C		0.90	55.9	E		0.91	57.3	E	
9th Avenue (N-S)	NB-R	0.19	11.2	B		0.19	11.2	B		0.17	13.7	B		0.17	13.7	B		0.31	15.1	B		0.31	15.1	B	
	SB-L	0.27	4.9	A		0.27	4.9	A		0.31	5.3	A		0.32	5.3	A		0.18	4.4	A		0.18	4.3	A	
	SB-T	0.40	1.3	A		0.40	1.3	A		0.41	1.3	A		0.42	1.4	A		0.42	1.4	A		0.42	1.4	A	

NOTES:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

* - Denotes Impacted Intersections

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-8
2013 With-Action Traffic Conditions

THIS TABLE HAS BEEN REVISED FOR FEIS

ANALYZED INTERSECTIONS	LANE GROUP	2013 NO-ACTION AM Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 WITH-ACTION AM Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION MD Peak Hour V/C Ratio	Delay (Sec)	LOS	2013 WITH-ACTION MD Peak Hour V/C Ratio	Delay (Sec)	LOS		2013 NO-ACTION PM Peak Hour V/C Ratio	Delay (Sec)	LOS	2013 WITH-ACTION PM Peak Hour V/C Ratio	Delay (Sec)	LOS	
W.15th Street (WB) @	WB-LTR	0.63	38.4	D		0.64	38.7	D		0.87	53.0	D	0.87	52.8	D		0.50	35.4	D		0.52	35.8	D	
9th Avenue (N-S)	NB-DefL	0.24	12.9	B		0.24	13.0	B		0.13	10.0	A	0.13	10.1	B									
	NB-T	0.06	0.9	A		0.06	0.9	A		0.06	0.9	A	0.06	0.9	A		NB-LT 0.15	1.0	A		NB-LT 0.15	1.0	A	
	SB-TR	0.61	14.2	B		0.61	14.2	B		0.65	14.8	B	0.66	14.9	B		0.75	16.6	B		0.75	16.7	B	
W.14th Street (E-W) @	EB - LTR	0.82	54.8	D		0.88	61.7	E	*	0.66	38.2	D	0.68	38.8	D		1.11	120.4	F		1.18	145.3	F	*
9th Avenue (N-S)	WB - LTR	1.08	97.7	F		1.10	103.4	F	*	1.06	90.1	F	1.10	104.5	F	*	1.14	118.9	F		1.20	143.8	F	*
	NB - LTR	0.40	35.4	D		0.40	35.4	D		0.45	40.0	D	0.45	40.0	D		0.39	33.7	C		0.39	33.7	C	
	SB - LT	0.72	22.4	C		0.73	22.5	C		0.82	26.3	C	0.83	26.7	C		0.93	39.1	D		0.94	40.2	D	
	SB - R	0.28	16.3	B		0.28	16.3	B		0.28	19.1	B	0.28	19.1	B		0.83	37.6	D		0.83	37.6	D	
W.23rd Street (E-W) @	EB - LT	0.85	36.9	D		0.91	43.4	D		0.93	44.3	D	1.06	78.3	E	*	0.67	26.5	C		0.74	28.9	C	
8th Avenue (NB)	WB - TR	0.87	35.6	D		0.86	35.1	D		1.06	74.1	E	1.14	101.6	F	*	0.83	32.3	C		0.91	38.2	C	
	NB - LTR	0.72	20.3	C		0.72	20.3	C		0.99	40.2	D	0.99	39.9	D		0.72	20.4	C		0.72	20.4	C	
W.14th Street (E-W) @																	EB-DefL 0.80	53.2	D		EB-DefL 0.87	64.7	D	*
8th Avenue (NB)	EB - LT	0.81	34.4	C		0.85	38.0	D		0.85	36.3	D	0.89	39.8	D		EB-T 0.47	23.4	C		EB-T 0.51	24.2	C	
	WB - TR	0.91	40.8	D		0.93	43.2	D		0.70	27.6	C	0.73	28.5	C		0.81	32.6	C		0.85	35.5	C	
	NB - LTR	0.58	12.9	B		0.58	12.9	B		0.78	20.9	C	0.78	20.9	C		0.56	12.7	B		0.56	12.7	B	
W.14th Street (E-W) @ Washington Street (SB) (Unsignalized)	WB- LT	0.27	10.7	B		0.27	10.8	B		0.33	11.9	B	0.33	12.0	B		0.24	12.5	B		0.24	12.6	B	

NOTES:
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DfL-Analysis considers a Defacto Left Lane on this approach .
V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle
LOS - Level of service
* - Denotes Impacted Intersections
Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000).

Table 16-9
Summary of Impacted Intersections
THIS TABLE HAS BEEN REVISED FOR THE FEIS

IMPACTED INTERSECTIONS	PEAK PERIOD AM	MD	PM
W. 30th Street (EB) @ 12th Avenue (N-S) (Route 9A)		X	X
W. 24th Street (E-W) @ 12th Avenue (N-S) (Route 9A)		X X	X
W. 34th Street (EB) @ 11th Avenue (SB)			X
W.26th Street (EB) @ 11th Avenue (SB)			X
W.23rd Street (E-W) @ 11th Avenue (N-S)	X		
W.20th Street (WB) @ 11th Avenue (N-S) (Route 9A)		X	X
W. 18th Street (EB) @ 11th Avenue (N-S) (Route 9A)		X	X
W. 17th Street (E-W) @ 11th Avenue (N-S) (Route 9A)	X	X X	X
W.16th Street (EB) 11th Avenue (N-S) (Route 9A)		X	X
W. 15th Street (E-W) @ 11th Avenue (N-S) (Route 9A)	X	X	X
W.14th Street (EB) 11th Avenue (N-S) (Route 9A)		X	

IMPACTED INTERSECTIONS	PEAK PERIOD AM	MD	PM
W.26th Street (EB) @ 10th Avenue (NB)	X	X	
W.25th Street (WB) @ 10th Avenue (NB)		X	X
W.23rd Street (E-W) @ 10th Avenue (NB)		X	X
W.14th Street (E-W) @ 10th Avenue (NB)			X
W.34th Street (EB) @ 9th Avenue (SB)	X	X	X
W.30th Street (EB) @ 9th Avenue (SB)	X		
W.26th Street (EB) @ 9th Avenue (SB)	X	X	
W.24th Street (EB) @ 9th Avenue (SB)	X	X	
W.23rd Street (E-W) @ 9th Avenue (SB)	X	X X	X
W.17th Street (WB) @ 9th Avenue (SB)	X	X	
W.14th Street (E-W) @ 9th Avenue (N-S)	X	X	X
W.23rd Street (E-W) @ 8th Avenue (NB)		X	
W.23rd Street (E-W) @ 8th Avenue (NB)			X

seconds (LOS ~~E~~F) to ~~71.9~~ 98.9 seconds (LOS ~~E~~F). At W. 24th Street, the southbound left-turn delay would increase from ~~136. 9~~ 137.0 seconds (LOS F) to ~~140.9~~ 141.0 seconds (LOS F) and the westbound right-turn would increase from ~~110.1~~ 111.6 seconds (LOS F) to ~~123.1~~ 122.3 seconds (LOS F). At W. 20th Street, the southbound movement delay would increase from ~~82.9~~ 96.4 seconds

(LOS F) to ~~95.4~~ 109.1 seconds (LOS F), while at W. 18th Street, the southbound through movement would increase from ~~60.7~~ 74.2 seconds (LOS E) to ~~67.2~~ 83.4 seconds (LOS ~~E~~F)

The W. 17th Street intersection would have significant adverse impacts on the westbound left-turn and right-turn movements, with delays increasing from 316.0 seconds (LOS F) to ~~462.8~~ 440.9 seconds (LOS F), and from 182.9 seconds (LOS F) to ~~390.4~~ 337.0 seconds (LOS F), respectively, while the southbound through movement delay would rise from ~~85.2~~ 99.6 seconds (LOS F) to ~~94.3~~ 109.4 seconds (LOS F). At W. 16th Street and W. 15th Street, the southbound through movement delays would increase from ~~115.0~~ 134.7 seconds (LOS F) to ~~132.1~~ 147.3 seconds (LOS F) and from ~~94.0~~ 148.3 seconds (LOS F) to ~~106.5~~ 159.8 seconds (LOS F), respectively, while at W. 14th Street, the southbound through movement delay would increase from ~~70.1~~ 81.9 seconds (LOS ~~E~~F) to ~~80.2~~ 91.3 seconds (LOS ~~E~~F).

In the PM peak hour, significant traffic impacts are expected at W. 30th Street, W. 24th Street, W. 20th Street, W. 18th Street, W. 17th Street, W. 16th Street and W. 15th Street. At W. 30th Street the No-Action southbound left-turn delay would increase from ~~65.5~~ 82.2 seconds (LOS ~~E~~F) to ~~82.2~~ 107.1 seconds (LOS F), whereas at W. 24th Street, the westbound right-turn delay would increase from ~~123.6~~ 126.2 seconds (LOS F) to 140.7 seconds (LOS F). To the south at W. 20th Street, the southbound delay would increase from ~~82.4~~ 92.6 seconds (LOS ~~E~~F) to ~~88.5~~ 99.2 seconds (LOS F) and at W. 18th Street, the northbound delay would increase from ~~52.7~~ 53.3 seconds (LOS D) to ~~72.3~~ 70.6 seconds (LOS E). At W. 17th Street, the westbound approach would be significantly adversely impacted with delays reaching LOS E/F while at W. 16th Street, the southbound delay would increase from ~~66.0~~ 74.5 seconds (LOS E) to ~~70.7~~ 78.6 seconds (LOS E), and at W. 15th Street the southbound movement deay would increase from 88.6 seconds (LOS F) to 93.3 seconds (LOS F).

Eleventh Avenue Corridor

Within the grid itself, as noted in Table 16-8, significant adverse impacts are concentrated on the cross-streets, particularly the principal ones (W. 34th Street and W. 23rd Street). Along this corridor, Table 16-8 shows that in the AM peak hour, there would be a significant adverse impact on the southbound left-turn at W. 23rd Street, with No-Action delay increasing from ~~50.8~~ 51.2 seconds (LOS D) to ~~59.3~~ 58.7 seconds (LOS ~~D~~E). In the PM peak hour, there would be an eastbound significant adverse impact at W. 34th Street and at W. 26th Street with delays rising from ~~85.1~~ 117.0 seconds (LOS F) to ~~97.3~~ 131.0 seconds (LOS F) and from ~~49.4~~ 50.0 seconds (LOS D) to ~~59.2~~ 60.1 seconds (LOS E), respectively.

Tenth Avenue Corridor

Along the Tenth Avenue corridor, cross-street significant adverse impacts were identified at W. 26th Street, W. 25th Street, W. 23rd Street and W. 14th Street. At W. 26th Street, the eastbound movement would be impacted in the AM and midday peak hours, with No-Action delays increasing from 63.7 seconds (LOS E) to 88.4 seconds (LOS F) and from 138.1 seconds (LOS F) to 182.7 seconds (LOS F), respectively. At W. 25th Street, midday and PM significant adverse impacts were identified on the westbound approach with delays rising from ~~48.1~~ 49.9 seconds (LOS D) to ~~66.1~~ 69.6 seconds (LOS E) and from ~~92.9~~ 97.7 seconds (LOS F) to ~~142.7~~ 148.5 seconds (LOS F), respectively.

At W. 23rd Street, the eastbound left-turn would be significantly adversely impacted in the midday peak hour, with delays increasing from ~~109.9~~ 109.7 seconds (LOS F) to ~~129.9~~ 127.4 seconds (LOS F), while in the PM, the westbound right-turn movement would have delay increase from ~~43.3~~ 43.8 seconds (LOS D) to ~~60.3~~ 61.3 seconds (LOS E). At the southern end of the study area, Table 16-8 shows that both the westbound left-turn and right-turn on W. 14th Street would be significantly adversely impacted in the PM peak hour, with delays increasing from ~~90.4~~ 98.3 seconds (LOS F) to ~~103.4~~ 110.4 seconds (LOS F) and from 72.2 seconds (LOS E) to ~~86.4~~ 85.3 seconds (LOS F), respectively.

Ninth Avenue Corridor

This southbound corridor would have cross-street significant adverse impacts at W. 34th Street, W. 30th Street, W. 26th Street, W. 24th Street, W. 23rd Street, W. 17th Street and W. 14th Street. At W. 34th Street, the eastbound movement would have significant adverse impacts in the AM, midday and PM peak hours, with delays increasing from ~~120.1~~ 123.6 seconds (LOS F) to ~~128.0~~ 131.1 seconds (LOS F), from ~~71.6~~ 85.1 seconds (LOS ~~E~~F) to ~~81.2~~ 95.9 seconds (LOS ~~E~~F) and from ~~133.1~~ 146.2 seconds (LOS F) to ~~135.2~~ 148.8 seconds (LOS F) during these hours, respectively. At W. 30th Street, No-Action delay on the eastbound approach would increase from ~~110.1~~ 119.2 seconds (LOS F) to ~~117.9~~ 128.1 seconds (LOS F), in the AM peak hour, while in the AM and midday peak hours, the eastbound W. 26th Street approach would also be significantly adversely impacted, with delays increasing from 155.2 seconds (LOS F) to 178.4 seconds (LOS F) and from ~~128.4~~ 129.2 seconds (LOS F) to ~~152.3~~ 154.1 seconds (LOS F), respectively.

The eastbound W. 24th Street approach delay would increase in the AM from ~~98.4~~ 100.4 seconds (LOS F) to ~~101.8~~ 104.7 seconds (LOS F), and from ~~45.2~~ 51.4 seconds (LOS D) to ~~52.9~~ 61.1 seconds (LOS ~~D~~E) in the midday, while at W. 23rd Street, the westbound left-turn would be significantly adversely impacted in the AM, midday and PM peak hours, with No-Action delays increasing from ~~112.7~~ 115.9 seconds (LOS F) to ~~140.3~~ 140.0 seconds (LOS F), from ~~73.1~~ 80.0 seconds (LOS E) to ~~119.5~~ 119.2 seconds (LOS F) and from ~~36.1~~ 38.2 seconds (LOS ~~C~~D) to ~~55.4~~ 57.6 seconds (LOS E), respectively. At W. 17th Street, the westbound approach would be significantly adversely impacted with delays increasing from 40.4 seconds (LOS D) to ~~46.8~~ 46.3 seconds (LOS D) in the AM and from 58.6 seconds (LOS E) to ~~76.0~~ 67.8 seconds (LOS E) in the midday peak hour. At the southern edge of the study area at W. 14th Street, there would be significant adverse impacts in all peak hours,

with westbound delay increasing from 97.7 seconds (LOS F) to ~~102.1~~ 103.4 seconds (LOS F) in the AM, from ~~86.1~~ 90.1 seconds (LOS F) to ~~107.3~~ 104.5 seconds (LOS F) in the midday, and from ~~114.0~~ 118.9 seconds (LOS F) to ~~143.1~~ 143.8 seconds (LOS F) in the PM peak hours. Eastbound delay would increase from 54.8 seconds (LOS D) to 61.7 seconds (LOS E) in the AM peak hour, and from ~~116.7~~ 120.4 seconds (LOS F) to ~~144.0~~ 145.3 seconds (LOS F) in the PM.

Eighth Avenue Corridor

As shown in Table 16-8, there would be a significant adverse impact at W. 23rd Street in the midday peak hour with the eastbound delay increasing from ~~38.1~~ 44.3 seconds (LOS D) to ~~63.7~~ 78.3 seconds (LOS E), and westbound delay increasing from ~~58.4~~ 74.1 seconds (LOS E) to ~~84.3~~ 101.6 seconds (LOS F). In addition, at W. 14th Street, the eastbound ~~approach~~ left-turn movement would have a significant adverse impact in the PM peak hour, with delay increasing from ~~51.3~~ 53.2 seconds (LOS D) to 64.7 (LOS D).

Chapter 22, "Mitigation," presents improvement measures to address the significant adverse traffic impacts that would occur as a result of the proposed action.

PARKING

The proposed action would displace nine public off-street parking facilities (Nos. 12, 13, 14, 15, 16, 20, 26, 27 and 29 on Figure 16-5), as well as No-Action parking demand generated on projected development sites. Compared to the No-Action condition, the number of available public off-street parking spaces is expected to decline by 1,287 in the midday and 723 spaces during the overnight period. It is assumed that development sites would provide accessory parking, but no new public parking is assumed for the analysis.

As was the case for No-Action travel demand in traffic analysis, No-Action parking demand on the public parking system would also be displaced from the projected development sites. This amounts to approximately ~~236~~ 233 spaces at midday and ~~60~~ 59 spaces overnight. All project-related parking demand in excess of the as-of-right accessory supply provided is added to the public parking system. Table 16-10 shows the new overall hourly parking demand in the future with the proposed action and the excess demand that would be added to the area's public parking system. As shown in the table, after accounting for about ~~1,118~~ 1,061 expected accessory spaces (and no new public parking spaces) on the projected development sites, as well as the loss of No-Action demand on these sites (~~236~~ 233 spaces at midday and ~~60~~ 59 spaces overnight), the proposed action would add a net total of approximately ~~371~~ 389 midday spaces and ~~776~~ 808 overnight spaces to the area's public parking system.

Table 16-10 Weekday Parking Demand From Proposed Action

THIS TABLE HAS BEEN REVISED FOR THE FEIS

	Residential (1,2)	Destination (3,4)/ Neighborhood Retail	Museum/Community Facility (5)	Total Accumulation	Accessory Supply	Excess Demand
	Accumulation	Accumulation	Accumulation			
12-1 AM	1883	0	0	1883	1,061	822
1-2	1883	0	0	1883	1,061	822
2-3	1883	0	0	1883	1,061	822
3-4	1883	0	0	1883	1,061	822
4-5	1883	0	0	1883	1,061	822
5-6	1869	0	0	1869	1,061	808
6-7	1827	3	0	1830	1,061	769
7-8	1756	9	2	1767	1,061	706
8-9	1628	9	6	1643	1,061	582
9-10	1589	40	29	1658	1,061	597
10-11	1540	68	60	1668	1,061	607
11-12	1502	83	78	1663	1,061	602
12-1 PM	1502	83	98	1683	1,061	622
1-2	1488	84	80	1652	1,061	591
2-3	1492	83	62	1637	1,061	576
3-4	1533	77	55	1665	1,061	604
4-5	1582	71	39	1692	1,061	631
5-6	1668	71	9	1748	1,061	687
6-7	1737	68	20	1825	1,061	764
7-8	1816	73	19	1908	1,061	847
8-9	1877	51	0	1928	1,061	867
9-10	1884	12	0	1896	1,061	835
10-11	1884	5	0	1889	1,061	828
11-12	1883	0	0	1883	1,061	822

	Weekday	Evening / Overnight
Peak excess demand	622	867
Less displaced demand	-233	-59
Net peak excess demand allocated to public parking system	389	808

Notes:

(1) Residential based on 0.4 autos / household overnight.

(2) Assumes 8.075 pers-trips/D.U.; 8% auto mode share (distance 1/4-1/2 mi), 6% auto mode share (distance <=1/4 mi) ; and 1.5 auto occupancy.

(3) Temporal distribution based on ITE Trip Generation 6th Ed. Landing Use Code 820

(4) Assumes person-trips/1,000 gsf based on formula; 20% auto mode share; and 2.00 auto occupancy.

(5) Based on American Museum of Natural History, Planetarium and North Side Project FEIS 1996.

Table 16-11, 2013 With-Action Public Off-Street Parking Utilization

	Midday Period				Overnight Period			
	Capacity	Net Excess Demand	Available Spaces	Utilization	Capacity	Net Excess Demand	Available Spaces	Utilization
2013 No-Action Conditions	4,740	4,593	147	97%	3,321	2,328	993	70%
Project Increment	-1,287	389	n/a	n/a	-723	808	n/a	n/a
2013 With-Action Condition	3,453	4,982	-1,529	144%	2,598	3,136	-538	121%

Table 16-11 shows the overall effect on the public parking system under With-Action conditions and compares it to No-Action conditions. As shown in the table, under With-Action conditions there would be a deficit of about ~~1,511~~ 1,529 spaces at midday and ~~506~~ 538 spaces overnight. During the weekday midday, there would be a 144 percent utilization rate, with ~~119~~ 121 percent overnight. It should be noted that the results in Table 16-11 continue to assume that there would be no new overnight spaces. However, at a ~~119~~ 121 percent overnight utilizations rate, it is anticipated that it would become more economically viable for operators of facilities that are now closed during the overnight to remain open during this period. It is therefore reasonable to assume that some of the facilities now closed during the overnight would remain open during this period as demand increases, thereby reducing the future overnight utilization rate in the study area. With all public parking facilities remaining open overnight over the long-term, the utilization rate in that period would fall to ~~90~~ 91 percent.

The on-street midday supply is assumed to remain unchanged in the future with the proposed action. While the approximately 1,500 alternate-side parking spaces would already be fully utilized, the 300 metered spaces would be expected to have a 95 percent utilization rate, with about 15 spaces remaining available at midday. While they would be available to accommodate project-related demand, this small number of metered curbside spaces would not measurably change the projected over-capacity conditions on the off-street public parking system.

Off-street parking utilization levels would be above capacity during the midday period with the proposed action, while it is expected that the public parking system would be able to accommodate the expected increase in residential overnight demand (on the assumption that additional facilities would remain open during the overnight period, as noted above). According to the *CEQR Technical Manual*, for proposed actions within the Manhattan Central Business District (defined as the area south of 61st Street), the inability of the proposed action or the surrounding area to accommodate projected future parking demands would be generally considered a parking shortfall, but is not deemed to be a significant impact. The unsatisfied demand for parking spaces at midday would result in vehicles parking outside of the quarter-mile study area and motorists walking greater distances

to their destinations. As parking shortfalls do not constitute significant adverse impacts for *CEQR* purposes, mitigation is not required.

E. BASE FAR SCENARIO

As discussed in Chapter 1 "Project Description," for the Base FAR Scenario, there would be 1,667 fewer dwelling units, while all other uses remain identical to the proposed action. Table 16-12 shows the travel demand forecast for the Base FAR Scenario compared to the proposed project.

As shown in the table, the Base FAR Scenario would generate ~~198~~ 185 fewer vehicle trips in the AM peak hour, ~~154~~ 84 fewer vehicle trips in the midday and ~~218~~ 191 fewer vehicle trips in the PM. With fewer vehicle trips in each peak hour, the Base FAR Scenario would have a lesser traffic impact than the proposed action, especially in the AM peak hour when the Base FAR Scenario would have less than one-half the traffic increment of the proposed action. It is expected that the Base FAR Scenario would have ~~6~~ 5 impacted intersections in the AM (versus ~~10~~ 11 for the proposed action), 18 impacted intersections in the Midday (same as for the proposed action) and ~~13~~ 14 impacted intersections in the PM (versus ~~15~~ 16 for the proposed action).

Table 16-12: Base FAR Scenario Traffic Forecast (Vehicles)

	PEAK HOUR VEHICLE TRIPS		
	AM	**MD**	**PM**
BASE FAR SCENARIO	110	550	342
PROPOSED ACTION	295	634	533
DIFFERENCE	-185	-84	-191
% OF PROPOSED ACTION	37%	87%	64%

With 1,667 fewer residential units, there would also be a lower demand for parking during both the midday and overnight periods under the Base FAR Scenario. In the critical midday peak hour, the off-street parking utilization rate would be approximately 138 percent versus 144 percent for the proposed action.

CONCLUSION

This chapter analyzes the effects of added traffic and parking demand from projected development sites on the West Chelsea study area street system during the weekday AM, midday and PM peak hours. The results of the analyses show that demand generated by the proposed action would create significant adverse traffic impacts at ~~10~~ 11 intersections in the AM peak hour, 18 intersections in the

midday, and ~~15~~ 16 in the PM peak hour. Impacts along Route 9A were distributed among various intersection movements, while impacts within the street grid were concentrated on the cross-street approaches. Although the proposed action would result in a shortfall in the supply of public parking in the vicinity of projected development sites, no significant adverse parking impacts were identified based on *CEQR* criteria.